

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)



Audit Number: AO-000667

SITE DETAILS

Site: **Tyson Fresh Meats - Amarillo Plant**
Address: Farm Road 1912 Highway 66 East, 79120, Amarillo, Texas, UNITED STATES
Contact Person: Brittany Craig
AWS Reference Number: AWS-000473
Site Structure: Single Site

CERTIFICATION DETAILS

Certification status: Certified Core
Date of certification decision: 2023-Nov-22
Validity of certificate: 2026-Nov-22

AUDIT DETAILS

Audited Service(s): AWS Standard v2.0 (2019)
Audit Type(s): Initial Audit
Audit Start Date: 2023-Sep-19
Lead Auditor: Monserrath Zamora
Audit team participants:
Mark Carroll
Site Participants:
Brittany Craig, Sustainability Associate, Sustainability & Global Impact
Chris Knotts, Waste Water Superintendent
Lucian Bradshaw, Complex Environmental Manager

AUDIT TIMES

Dates	Audit from	Duration	Auditor	Description
2023-Sep-19	08:00:00 - 17:30:00	09:30	Monserrath Zamora	
2023-Sep-20	08:00:00 - 17:00:00	09:00	Monserrath Zamora	
2023-Sep-21	08:00:00 - 12:30:00	04:30	Monserrath Zamora	

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)



Audit Number: AO-000667

ADDITIONAL INFO

Summary of Audit Findings: A total of 6 findings were raised during the certification audit, 0 major non-conformities, 2 minor non-conformities, and 4 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 60 days of receipt of the audit report by 16/12/2023.

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

The audit team recommends certification of Tyson Foods, Amarillo at Core level pending approval of the corrective action plans and closure of the minor non-conformities.

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 Tyson Fresh Meats, Amarillo Plant against the AWS International Water Stewardship Standard Version 2.0.

Amarillo Complex is a food facility that has a beef slaughtering, rendering and tanning process. The company is located at Farm Road 1912 Highway 66 East, Amarillo, Texas, United States of America, 79120 (Latitude: 35.25829, Longitude: -101.65005). The wastewater generated from various processes at the plant is treated, routed through anaerobic lagoons and finally transported via pipeline to a playa lake (McGee Lake). This treated wastewater is then withdrawn from McGee Lake and sprayed onto irrigation pivots.

The facility is located in a semi-desert area with flat topography in the Red River basin. The average annual rainfall is about 20 inches.

The audit was conducted onsite from September 19th to September 21st, 2023.

The onsite visit included the assessment of influent water points, water tower, water related infrastructure, IWRA on-site (Playa Lake), cafeteria, administrative offices, restrooms, locker rooms, tannery, kill floor, wastewater treatment plant and chemical storage areas.

The following external stakeholders were interviewed during the audit:

- City of Amarillo
- Farm Manager
- PK Double C Environmental Consulting

FINDINGS

NUMBER OF FINDINGS PER LEVEL

Observation	4
Minor	2

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000667

FINDING DETAILS

Finding No:	TNR-006038
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:	The fresh water storage tower is part of the water infrastructure of the site. It is not considered an IWRA.
Finding No:	TNR-005842
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:	It is not clear if all cattle is sourced within the site's catchment.
Finding No:	TNR-006044
Checklist Item No:	1.5.1
Status:	Open
Finding level:	Observation
Checklist item:	Water governance initiatives shall be identified, including catchment plan(s), water-related public policies, major publicly-led initiatives under way, and relevant goals to help inform site of possible opportunities for water stewardship collective action.
Findings:	During the stakeholder interview with the city of Amarillo, the stakeholder mentioned that they have some water governance initiatives such as: conservation, education, irrigation programs and others. The site could consider get engaged with some of this water governance initiatives.
Finding No:	TNR-006050
Checklist Item No:	3.6.1
Status:	Open
Finding level:	Observation
Checklist item:	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.
Findings:	Quantifying the site's WASH facilities would further strengthen conformity for the indicator, including the number of water supply (fountains, ice machines, water filters), toilets, and hygiene stations (including showers, hand sanitizer stations, and eyewashing) available in each of the site's buildings, and the ratio of staff per facility provided.

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000667

Finding No: TNR-006168
Checklist Item No: 5.2.1
Status: In Progress - CA plan approved
Finding level: Minor
Due date: 2024-Sep-19
Checklist item: The water stewardship plan, including how the water stewardship plan contributes to AWS Standard outcomes, shall be communicated to relevant stakeholders.
Findings: The evidence provided is for internal stakeholders and the information that is publicly available is general. The interviewed stakeholders don't have the knowledge about the water stewardship plan and there is not evidence of this disclosure with them.
Corrective action: 2.9.3.2 the specific corrective action(s) to address the minor non-conformity
i) Engage with Primary stakeholders identified in criteria 1.2 stakeholder table via in-person, phone, or email
ii) disclose water stewardship plan v3.0 from criteria 2.3.2 via direct email

Finding No: TNR-006058
Checklist Item No: 5.4.1
Status: In Progress - CA plan approved
Finding level: Minor
Due date: 2024-Sep-19
Checklist item: The site's shared water-related challenges and efforts made to address these challenges shall be disclosed.
Findings: The evidence provided shows efforts on individual actions taken to address the shared water challenges, however, the site's shared water challenges that were identified in Criterion 1.6. and efforts made to address them have not been disclosed.
Corrective action: 2.9.3.2 the specific corrective action(s) to address the minor non-conformity
i) Develop a summary document to: Describe actions/efforts undertaken to address shared water challenges
ii) Discuss stakeholder engagement efforts to all primary external stakeholders, with an emphasis on engagement directed toward shared water challenges
iii) Actively disclose this information to target audience(s) and actively communicate this

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)



Audit Number: AO-000667

Report Details

Report	Value
Report prepared by	Monserrath Zamora
Report approved by	Lurdes Guerra
Report approved on (Date)	16 October 2023

Surveillance

Proposed date for next audit
2024-Sep-19

Stakeholder Announcements

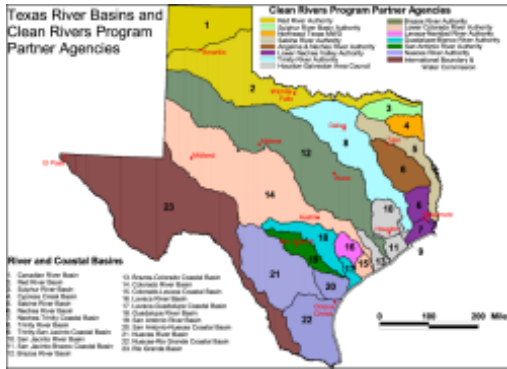
Date of publication	Location
12/07/2023	https://a4ws.org/wp-content/uploads/2023/07/AWS-000473-Tyson-Fresh-Meats-2023-Stakeholder-Announcement.pdf
07/07/2023	https://watersas.org/wp-content/uploads/2023/07/Stakeholder-Announcement-Tyson-Fresh-Meats-AWS-000473.pdf
23/07/2023	Amarillo Globe-News
Comment	<p>The stakeholder announcement was published on WSAS and AWS website.</p> <p>The site published the stakeholder announcement in a local newspaper: "Amarillo Globe-News" (FW ORDER #90072242, "Fwd Order #907724336616442.msg; C000800001M.pdf).</p>

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000667

Catchment Information



Red River Basin.png



Red River Basin 2.png

Catchment Information

The Red River Basin is bounded on the north by the Canadian River Basin and on the south by the Brazos, Trinity, and Sulphur river basins. The Red River extends from the northeast corner of the State, along the Texas/Arkansas and Texas/Oklahoma state borders, across the Texas Panhandle to its headwaters in eastern New Mexico. The Red River Basin has a drainage area of 48 030 square miles, of which 24 463 square miles occur within Texas (RegionA_2021RWP_V1.pdf).

The average annual rainfall in the Amarillo area is about 20 inches. Amarillo is considered a semi-desert area.

The facility is located in a semi-desert area with flat topography in the Red River basin. The primary shallow subsurface soil near the facility is characterized as the "Pullman Clay Loam" which is a well-drained has low permeability, low recharge, moderate to high shrink-swell potential and is highly corrosive to steel.

The secondary shallow soil near the facility is the Randall Clay, which is a poorly-drained soil found in the bottoms of playa lakes. This clay has a very high shrink-swell potential and has low permeability. The bottom of McGee Lake (Playa Lake) is lined with this Clay.

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000667

Client Description and Site Details



Site Boundaries.jpeg

Client/Site Background

The Amarillo Complex has operated a beef slaughtering, processing, and rendering facility since 1974. The facility process was expanded by adding the tanning process in 1992.

The plant processes are: harvesting beef cows and processing beef into a variety of cuts and trims. Amarillo also produces and supplies trim/product for numerous other Tyson facilities that do not harvest live beef.

Everything that is not harvested or processed, the site will render into technical and inedible rendering products. Inedible rendering consists of numerous products as well as pet food. The site produces hides, these consist of tanned, blue and raw hides.

The water is supplied by the City of Amarillo. A wastewater plant is also a big part of the plant, it has 6 lagoons. Once the water has been treated from the anaerobic lagoons it is then sent to the Playa Lake. From there the process water is reused by plumbing water into center pivots and irrigated on Tyson's farmland. A service center (PBX), cold storage, and administrative offices are also located at the Amarillo Complex.

Summary of Shared Water Challenges

Summary of Shared Water Challenges

The site has identified the following shared water challenges:

- Water Quantity: aquifer depletion due to pumping that exceeds recharge.
- Water Quality: surface water and groundwater quality: nutrient concentrations, total dissolved solids, and metals. TDS and metals have been attributed to geologic location and nutrient concentrations due to historical treated wastewater effluent used for irrigation.
- Water Governance: discussion with city and Tyson on increasing water cost. The Amarillo Complex is one of the highest (10-12%) total water usage.
- Important Water-Related Areas: The site will be planting new crop production moving forward to improve nutrient uptake throughout the growing seasons. This allows nutrients to be pulled out of the soils and bound into the plant roots up to 4-6 months. The new crops Tyson would be able to get 2-4 cuttings (Harvests) per year instead of 1 cutting a year. Since this finding, Tyson has installed new groundwater monitoring wells south east of the playa.

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000667

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 Red River Basin, Amarillo, Texas, USA.
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.

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000667

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




Audit Number: AO-000667

- Comment The site has identified and mapped its physical scope, including:
- Site boundaries: Amarillo Plant is located in Potter county (Tyson Amarillo Property Boundary v2.pdf; Water Tower Image.png).
 - Water-related infrastructure, including piping network: the maps and diagrams show all water lines, a fresh water storage tower (Water Tower), a brine pond, the wastewater treatment plant, the brine line, the UIC well (Underground Injection Well), catch basin points (water drains), the water line with fire hydrant, the on-site groundwater monitoring wells, boilers, the water softener, eye wash stations and locker rooms (Site Map.pdf; Amarillo Complex Water Infrastructure.png; Figure 1 - Site and GW Sampling Location Map.pdf; Tyson Amarillo Harvest Floor.jpeg). The site is currently constructing a new area which has been identified and mapped including the access to WASH facilities like: bathrooms, showers and locker rooms (Infrastructure of new area.jpeg). During the on-site audit a CAD-map was shown with all water related infrastructure.
 - The water source comes from the City of Amarillo and its ultimate water source includes the City of Amarillo's well fields completed in the Ogallala Aquifer (groundwater) and Lake Meredith (surface water reservoir, Canadian River feeds into Lake Meredith and originates in New Mexico) received from the Canadian River Municipal Water Authority (CRMWA). The surface and groundwater blend is determined by the levels of salt (Indicator 1.5.3: Panhandle Overview.docx).
The site's water supply resides in the Region A Panhandle Regional Water Planning Area (Amarillo Complex Source Infrastructure Summary.docx; City of Amarillo Water Sources.docx; Amarillo Plant_catchmentoverview.pptx; LakeMeredithWatershedArea.png; Ogallala Aquifer.png). The plant has a backup line during emergencies sourced from groundwater and surface water but it is never used, this is a city water line.
 - The wastewater generated at the facility is segregated into two wastewater streams: a) wastewater treatment plant (sanitary wastewater, slaughter and processing wastewater, boiling and cooling tower blowdowns) and tannery beamhouse wastewater; and, b) hide-curing, tannery pickle and chrome wastewater (Tyson Amarillo GW Monitoring Plan 2020 Final_.pdf).
 - The wastewater treatment plant (stream a) has 6 anearobic lagoons, the treated effluent is discharged into Playa Lake (McGee Lake). This treated wastewater is then withdrawn from Playa Lake and sprayed onto seventeen (17) irrigation pivots. The limited precipitation received on-site is collected and pumped to Playa Lake (Effluent Application Soil Map 2019.jpg). The wastewater generated from tannery pickle and chrome tan (stream b) is directed to a chrome recovery process where residual chrome is removed for reuse. This wastewater is monitored for chrome recovery prior to being discharged into a waste disposal injection well with the hides brine wastewater. The disposal well is used to dispose nonhazardous wastes (Tyson Amarillo GW Monitoring Plan 2020 Final_.pdf; WDW 120.pdf).
- The site is located in the Red River Basin (Red River Basin.png).
- 1.2** *Understand relevant stakeholders, their water related challenges, and the site's ability to influence beyond its boundaries.*

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)



Audit Number: AO-000667

1.2.1	<p><i>Stakeholders and their water-related challenges shall be identified. The process used for stakeholder identification shall be identified. This process shall:</i></p> <ul style="list-style-type: none"> - <i>Inclusively cover all relevant stakeholder groups including vulnerable, women, minority, and Indigenous people;</i> - <i>Consider the physical scope identified, including stakeholders, representative of the site's ultimate water source and ultimate receiving water body or bodies;</i> - <i>Provide evidence of stakeholder consultation on water-related interests and challenges;</i> - <i>Note that the ability and/or willingness of stakeholders to participate may vary across the relevant stakeholder groups;</i> - <i>Identify the degree of stakeholder engagement based on their level of interest and influence.</i> 	 Yes
Comment	<p>The site has identified 8 different stakeholders and their water-related challenges including: the water service provider, the regional water provider, farmers and a farm manager (ultimate receiving water body) and consultants (Stakeholder list Tyson Foods.png).</p> <p>There are not vulnerable groups, women, minority, and indigenous people nearby the area.</p> <p>The degree of stakeholder engagement based on their level of interest and influence has been identified (Degree of influence-engagement.png). There have been two primary means of stakeholder engagement:</p> <ul style="list-style-type: none"> -Participation in local sustainability and water management conversations, such as work on the agriculture site to mitigate risk and employ best practices. -Direct conversations (call, in-person meeting, etc.) with stakeholders. <p>Evidence of stakeholders consultation on water-related interests and challenges has been identified (Farm Manager.docx; City of Amarillo 21921.docx; FW Update Report which includes cropping plan.msg; Canadian River Municipal Authority 3.10.21.docx; _EXTERNAL_- RE_ Revised Draft for WQ0001873000.msg; Tyson Amarillo GW Monitoring Plan 2020 Final sealed.pdf).</p>	
1.2.2	<p><i>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.</i></p>	 Yes
Comment	<p>The degree of influence between site and the stakeholder has been identified (refer to evidence provided for indicator 1.2.1).</p>	
1.3	<p><i>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.</i></p>	
1.3.1	<p><i>Existing water-related incident response plans shall be identified.</i></p>	 Yes

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000667

Comment	<p>The site has identified these water-related response plans:</p> <p>-Spill Prevention Control and Countermeasure Plan (SPCC): This plan has been prepared to meet the requirements of Title 40, Code of Federal Regulations, Part 112 (40 CFR Part 112).The purpose of this SPCC Plan is to establish and maintain a program to prevent the discharge of petroleum products, animal fats and vegetable oils, and other non-petroleum oils and greases into the waters of the United States (Amarillo SPCC Plan - 5-2018.docx). SPCC is currently under review, the review is performed every 5 years.</p> <p>-Emergency action plan: which indicates how the personnel will respond to emergencies of: fire, ammonia/chemical release, severe weather, workplace violence, severe injury, and power outage (FY23 Amarillo Emergency Action Plan.docx; FY23 Amarillo Emergency Response Plan.docx).</p> <p>This site has zero risk of flooding.</p>	
1.3.2	<i>Site water balance, including inflows, losses, storage, and outflows shall be identified and mapped</i>	 Yes
Comment	<p>The site has identified and mapped in a schematic diagram its inflows, losses, storage and outflows (refer to evidence provided for indicator 1.1.1: Amarillo Complex Water Infrastructure.png).</p>	
1.3.3	<i>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.</i>	 Yes
Comment	<p>The file "FY23 Amarillo Water Balance Tracking.xlsx" shows the water balance (losses are included as a percentage of difference; 1.3.2-1.3.3 Water balance.png). The data provided is from October 2022 to July 2023. A more detailed example of calculation of the water balance is presented in the file "Water Balance.xlsx". Change of team members and staff occurred between FY19-FY22 resulting in different spreadsheet formats and management of water data spreadsheets.</p> <p>For May/June/July 2023 the data was estimated due to the metering zeroed out and not working correctly.</p> <p>No stormwater to calculate. The peak seasons are spring and summer, seasonal high and low variances were quantified (FY23 Amarillo Water Balance Tracking.xlsx).</p> <p>The site has set a water intensity goal (water use/production, gal/lb) for 2023 (FY23 Water Use and Goals.xlsx). The Quaterly Injection Report, Quater 1, 2023 (1st Q Injection Well Report.pdf) shows that there are not exceedances of permit parameters for the Water Injection Well.</p>	
1.3.4	<i>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.</i>	 Yes

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000667

Comment Water quality of the site's water source has been quantified including physical and chemical parameters. Data is from 2022 and 2023 and the information is provided by the Environmental Laboratory of the City of Amarillo (city water testing.pdf; 2022 CCR Amarillo.pdf).

The site provided a summary of the nitrate results of the groundwater, from samples of 8 on-site wells, that were taken during the 3rd quarter 2022 (Tyson Fresh Meats, Inc. - Amarillo, TX.pdf).

The Nitrogen Reduction Plan 2022 (Tyson Nitrogen Report.pdf) shows average values and trends, from 2016 to 2021, for different parameters of the treated effluent, such as: total nitrogen content (TKN= Total Kjeldahl Nitrogen), ammonia, pH, TDS, conductivity, % NH3/TKN ratio and others.

The site has a farm nutrient concentration monitoring plan because the wells are needed to investigate elevated nitrate concentrations found in an existing monitoring well (WMW-2). The groundwater monitoring plan (GWMP), which is required by the TCEQ water quality permit states that the site must install wells when chemicals of concern, nitrates in this case, are detected above the protective concentration limit (PCL) (refer to indicator 1.1.1: Tyson Amarillo GW Monitoring Plan 2020 Final_.pdf; WDW 120.pdf).

The file "Playa Lake Samples.xlsx" shows different water quality parameters of Playa Lake effluent, for 2018-2019. Other water quality parameters of Playa Lake for 2022, July and September 2023 were quantified in Amarillo Weekly Wastewater Reports (7-7-23.pdf; 7-14-23.pdf; 7-23-23.pdf; 10-1-22.pdf; 10-8-22.pdf; 10-15-22.pdf; 9-1-23.pdf). The reports for 2022 also include water quality quantification for Effluent Comp, Brine Pond, Tap Water and others. The Playa Lake samples follow the wastewater permit procedure for testing. The file "03 Tables 2022 Final.pdf" presents data for the irrigation Pivot Point Soil Sampling from March 2023.

Apex is contracted to do soil and groundwater sampling. Currently, the farm began using PK double C Environmental Consulting. The farmer is responsible to handle all solids who is managed by Tyson's farm manager.

1.3.5 *Potential sources of pollution shall be identified and if applicable, mapped, including chemicals used or stored on site.* ✔
Yes

Comment "Amarillo Chemical Storage Locations.jpeg" file illustrates a map with potential sources of pollution locations. These are:

- TCCS Chemical Storage (freezer/cold storage).
- PBX Chemical Storage.
- Processing Sanitation Chemical Storage.
- Main Chemical Warehouse.
- Intervention Chemical Storage.
- Harvest Sanitation Chemical Storage.
- Tannery Dry and Liquid Chemical Storages.
- Rendering Chemical Storage.

The file "Tier-II-Paper-Report-for-2023-02-23-1677174592069.pdf" shows an inventory of the Emergency and Hazardous Chemicals, reporting period: January 1 to December 31, 2022.

The site has an online web tool (shown during the on-site audit) with a list of chemicals and their Safety Data Sheets (Safety Data Sheet example.png).

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.

CERTIFICATION REPORT


Alliance for Water Stewardship (AWS)

Audit Number: AO-000667

Comment The site has identified and mapped 4 Important Water-Related Areas inside its boundaries (On-site IWRA'S.png and refer to indicator 1.1.1: Site Map.pdf; Tyson Amarillo Property Boundary v2.pdf; Water Tower Image.png):

- Brine pond (double lined pond checked weekly) - good condition: this water is connected to the deep well injection.
- Playa Lake on farm (Lake McGee) - current condition being investigated: primary source of groundwater recharge in the Texas panhandle (RE_ Amarillo IWRA.msg).
- Fresh water storage tower - 200k gallons - good condition.
- Deep well injection from pond - good condition - checked annual per state requirement.

The fresh water storage tower is part of the water infrastructure of the site. It is not considered an IWRA.

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


Comment The site has identified and quantified the main water related costs associated with the operation of the plant. For example:

- Fresh Water Cost, 2019-2022 (Water Cost 19-22.png): the cost of the new water bill is under discussion (FW Water Rates_engagement.msg).
- List of water conservation projects (past, present, "in the works"), cost savings, and potential annual gallons per year (Book1.xlsx).
- Waste Water Cost 2022 (WW Analysis FY22.xlsx).
- Provision and maintenance of water-related infrastructure: CIR Corporate Funding List (Water-related Cost 2020-2022.xlsx).

It should be noted that Tyson is not known to generate any water-related revenues.

The site does generate economic, social and environmental water-related value in terms of employment, training of the staff, decreasing the pollution emissions by minimizing impact to soil, decreasing the water usage eases freshwater pumping (ground or surface) (The value of water management.docx).

Extra wastewater from the Playa Lake (Lake McGee) is provided free of charge to local farmers either directly to the site for fertilizer or transported to nearby farms. The quantified value is listed in the Land Application Report assigning the volume of treated effluent to each pivot that can be applied under TCEQ (01 Soil Report 2022 Final.pdf; 03 Tables 2022 Final.pdf).

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

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000667

- Comment The site provided maps where the location of bathrooms, showers and locker rooms has been identified (refer to indicator 1.1.1: Infrastructure of new area.jpeg, Tyson Amarillo Harvest Floor.jpeg).
- The locker rooms include sinks, toilets and showers, they are divided by gender. The access of WASH facilities was checked during the site visit by the auditor. The sanitary wastewater is treated on-site at the wastewater treatment plant (refer to indicator 1.1.1: Tyson Amarillo GW Monitoring Plan 2020 Final_).
- The site has hand sanitizer stations, water bottle filters are available at water fountains to team members to fill up personal water bottles. The site also has a cafeteria where water is available for washing hands and food preparation.
- Pictograms are available to team members on how to wash and sanitize hands.
- In the United States, the Occupational Safety and Health Administration (OSHA) “requires employers to provide all workers with sanitary and immediately-available toilet facilities (restrooms)” (on-site bathroom access.docx; WASH on-site.png). Further information on this regulatory requirement: Regulation: 29 CFR 1910.14: <https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.141>
- The site has safety policies: water access means staff have access to drinking water in the facility. Access to sanitation and hygiene means staff have access to bathrooms, toilets, and handwashing stations in the facility. The target is to monitor and maintain compliance with this requirement. Receiving a citation would be an example of not achieving this target.
- The site maintains a Food Safety program. This is monitored by the USDA on the plant (WASH on-site.png). The company highlights Food Safety in relation to water in its annual sustainability report: https://www.tysonfoods.com/sites/default/files/2023-09/Tyson_ESG_Report_2022.pdf: "Water is a critical resource for all life. As such, we recognize the vital responsibility we have to use water resources efficiently and in a manner that preserves product integrity and quality, which is why we partner on solutions to manage water risks and use."
- 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.* 🔍
Obs.

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000667

Comment The site has identified as primary inputs within the same catchment: the electricity and cattle (Xcel Energy 1.4.1.png; Cattle 1.4.1.png).

-Xcel energy: the coal substation uses wastewater reuse, no fresh water (<https://www.amarillo.gov/departments/planning-and-development-services/amarillo-water-utilities/wastewater-treatment/-fsiteid-1>). The remaining water leaves the facility through irrigation pivot. The site added a case study released in January of 2020 by the WRI to calculate the embedded water use from purchased electricity (guidance-calculating-water-use-embedded-purchased-electricity_0.pdf).


The file "2019 FY Electrical Usage.xlsx" presents the cost and consumption of electricity, excluding the industrial water wells. The embedded water calculation for purchased electricity was identified (Xcel Energy calculations 1.4.1.png).

-Water embedded from animals (cattle): cattle are sourced locally, throughout the great plains, and outsourced contractors. In Amarillo, 68% of purchased cattle are born outside the US but 100% of them are raised and harvested in the U.S; on average 1.00 gallon per pound of cattle to process. Starting in 2022, Tyson began the work of incentive producers of livestock and the embedded grain in adopting climate smart solutions.

Water quality has been identified including physical and chemical parameters, the information is provided by the Environmental Laboratory of the City of Amarillo (refer to indicator 1.3.4: city water testing.pdf; 2022 CCR Amarillo.pdf).

Water risks levels has been identified (Amarillo TX WASH map 1.4.1.png; Tyson Water Risk Assessment V2.pptx).

1.4.1 criteria shows map of Top 5 producers for Tyson's Amarillo facility. These top 5 cattle producers are not within the same HUC 8 watershed.


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 Off-site laundry is the only outsourced service that consumes water within the site's catchment. Aramark uses 5 062.5 gal/week of water washing laundry for Amarillo (Embedded water outsourced services.png).

Location: 1100 N. Fillmore Ave, Amarillo, TX 79101.

Truck washing is on-site.

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

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

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000667

Comment The site has identified the following water governance initiatives:

- Panhandle Water Planning Group (PWPG), Region A, 2021: <https://www.panhandlewater.org/region-a-pwpg/regional-water-plans> (RegionA_2021RWP_V1.pdf; RegionA_2021RWP_V2.pdf). The site is located within the Texas Regional Water Plans: Region A (pages 81-82).
- Panhandle Groundwater Management Area: <https://www.pgcd.us/>
- Groundwater Management Areas: http://www.twdb.texas.gov/groundwater/management_areas/index.asp; the site is located within the Groundwater Management Area 1 (GMA 1), (Groundwater Management Areas.png).

The Region A Panhandle Water Planning Group (PWPG) was established following intense drought conditions in the 1990s. The Texas Water Development Board (TWDB) established 16 regional water planning areas with their own regional water planning groups. The Panhandle regional water planning area consists of 21 counties including Potter and Randall. The site is located in Potter county.

The PWPG is made up of about 23 members representing a variety of interests including agriculture, industry, environment, public, municipalities, business, water districts, river authorities, water utilities, counties, groundwater management areas, and power generation.

The primary responsibility of the Region A Panhandle Water Planning Group is the development of a regional water plan every five years.

During the stakeholder interview with the city of Amarillo, the stakeholder mentioned that they have some water governance initiatives such as: conservation, education, irrigation programs and others. The site could consider get engaged with some of this water governance initiatives.

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

Comment The site has identified the following water-related legal and regulatory requirements (1.5.2 a.png; 1.5.2 b.png):

- Groundwater Management Areas: http://www.twdb.texas.gov/groundwater/management_areas/index.asp.
- State Regulations: Texas Commission of Environmental Quality (TCEQ): surface and groundwater:
 - a) Stormwater: the potential to discharge stormwater to "waters of the United States" does not exist at the site, therefore, the facility claimed an exemption from regulation applicability (Amarillo - Stormwater, NOT Permit TXR05P030.pdf; Amarillo - Stormwater, PE Exempt Cert (2015).pdf; Amarillo - Stormwater, TCEQ MSGP Not Required.pdf).
 - b) Permit to conduct underground injection (refer to indicator 1.1.1: WDW 120.pdf).
 - c) Water quality permit (WQ000001873.pdf).The wastewater permit is currently being renewed.
- Federal Regulations: U.S. Environmental Protection Agency (EPA): surface and groundwater.
- Groundwater District Rules: groundwater - Potter County (plant and farm location) resides in the Panhandle GCD and High Plains UGWD #1 (pages 91-95 of the 2021 -Panhandle Regional Water Plan, Volume 1 (refer to indicator 1.5.1: RegionA_2021RWP_V1.pdf)).
- Water volume limits: the cities have their own allocation to water in this location of the U.S. This point was confirmed with the city of Amarillo during the stakeholder interview.

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

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000667

Comment The file "Surface Water Catchment Water Balance.xlsx." presents the quantification of the water balance for Region A, including surface and groundwater. The specific water balance data for the Amarillo Municipal water system for 2021 is presented in the file "SummaryCategoryWaterBalance.pdf". The water balance, adapted from American Water Works Association, illustrates the balance of all water from input to consumption to loss in the treated distribution system (<https://www.twdb.texas.gov/conservation/municipal/waterloss/index.asp>).

The site provided general information about Lake Meredith and Ogallala Aquifer. In a typical year for Lake Meredith, the evaporation lowers the lake about 6-feet regardless of the depth. The volume that evaporates does changes as the level/surface area changes. The historical inflow of Lake Meredith from 1965 to 2018 was provided (Lake Meredith Facts 8182015.pdf). For the Ogallala Aquifer the water level change was presented in this file "Water Level Change Ogallala aquifer.png".

The average annual rainfall in the Amarillo area is about 20 inches. Amarillo is considered a semi-desert area. There was a drought in 2015, but Texas continues to be under a drought resulting in more reliance on groundwater than surface water. The use of groundwater and surface is blended to decrease salinity levels in Lake Meredith to the EPA regulated drinking water standards (CRMWA U.S. Drought monitor: <https://www.crmwa.com/drought-status>; Drought monitor.png).

The catchment has a low seasonal variability (< 0.33). The site used the WRI Aqueduct Risk Atlas to verify variability (Water Risk Atlas.png).

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

Audit Number: AO-000667

Comment Water quality of the catchment has been identified including physical, biological and chemical parameters. Data is from 2021, 2022 and 2023 and the information is provided by the Environmental Laboratory of the City of Amarillo. The information is detailed for: raw water (CRMWA supply), filtered water, well water and finished water (blended water which contains 64% of filtered water and 36% of well water) (refer to indicator 1.3.4: city water testing.pdf; 2022 CCR Amarillo.pdf). More quality reports are disclosed here: <https://www.amarillo.gov/departments/planning-and-development-services/amarillo-water-utilities/laboratory-administration/environmental-laboratory/water-quality-reports>.

The "2022 CCR Amarillo.pdf" (refer to indicator 1.3.4) shows a water quality report from the City of Amarillo which includes the following parameters for 2021: inorganic, radioactive and unregulated contaminants, chlorine, lead and cooper, turbidity, total coliform and others. The city is also monitoring for Cryptosporidium, a microbial parasite that may be commonly found in surface water. Cryptosporidium may come from animal and human feces in the watershed. The results of the monitoring indicated the absence of Cryptosporidium in the raw water and/or treated water.

A summary of the nitrate results of the groundwater was identified (refer to indicator 1.3.4: Tyson Fresh Meats, Inc. - Amarillo,TX.pdf).

Chloride concentrations are controlled in Lake Meredith by blending surface and groundwater. Lake Meredith chemical concentration is controlled under a State regulated maximum chloride level of 300 mg/L (Federal Drinking Water Standards recommend 250 mg/L) (refer to indicator 1.5.3: Lake Meredith Facts 8182015.pdf). The "Lake Meredith Salinity Control Project" was designed to improve the quality of water in Lake Meredith by intercepting brine water that is leaking into the Canadian River near Logan, New Mexico (<https://crmwa.com/lake-meredith-salinity-control-project>). It consists of one deep injection well completed both vertically and horizontally. There are currently 7 shallow extraction wells (1.5.4 a.png; 1.5.4 b.png).

The watershed of Lake Meredith consists primarily of farm and ranch lands, therefore, the susceptibility for surface water contamination is mainly from agricultural practices. Fertilizers, pesticides, chemicals and run-off from Confined Animal Feeding Operations (CAFOs) represent potential contamination sources (refer to indicator 1.3.4: 2022 CCR Amarillo.pdf) This report also presents Max/Min/Average concentrations. Amarillo's municipal water supply wells are locating mostly in ranching and farming areas. Susceptibility for contamination is mainly from agricultural chemicals, other potential sources of contamination are CAFOs, septic systems, oil field related activities and abandoned private water wells. The city has an ongoing Wellhead Protection Program, which is designed to apply TCEQ well standards and guidelines to protect against any pollution entering the underground water.

Surface water quality problems in the Canadian River Basin are: elevated dissolved solids, nutrients, and dissolved metals. Dissolved solids and metals have been attributed to geographic reasoning, but nutrients is contributed to municipal discharge of treated wastewater to surface waters. Eight segments in the PWPA were identified on the final 2016 303(d) list. All eight segments were classified by TCEQ as low priority and may be scheduled for Total Maximum Daily Load (TMDL) development (Constituents of Concern.png). 2022 303(d) list updates: <https://www.tceq.texas.gov/downloads/water-quality/assessment/integrated-report-2022/2022-imp-index.pdf>.

Saltcedar plants are an issue between the Ute Reservoir, NM and Meredith. Saltcedar is an invasive species with an impact to lower the water table and create a large deposit of salt in the soil (<https://www.invasivespeciesinfo.gov/terrestrial/plants/saltcedar> and <https://crmwa.com/salt-cedar-management-program>). For further information on Ute Reservoir, NM: https://www.ose.state.nm.us/Basins/Canadian/isc_Canadian_Ute.php

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

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000667

Comment	<p>The company has identified and mapped the following IWRA's:</p> <ul style="list-style-type: none"> -Surface Water, Lake Meredith: (refer to indicator 1.1.1: City of Amarillo Water Sources.docx; LakeMeredithWatershedArea.png). The link "https://crmwa.com/" shows up-to-date water status for the lake. -Groundwater, Ogallala Aquifer: water quantity risk showing water declines in the Ogallala Aquifer (water level change.png). <p>Both are under no threats.</p>	
1.5.6	<p><i>Existing and planned water-related infrastructure shall be identified, including condition and potential exposure to extreme events.</i></p>	 Yes
Comment	<p>Existing water-related infrastructure in the catchment has been identified (refer to indicator 1.1.1: Amarillo Complex Source Infrastructure Summary.docx; City of Amarillo Water Sources.docx; https://www.amarillo.gov/departments/planning-and-development-services/amarillo-water-utilities), including:</p> <ul style="list-style-type: none"> -The city's water supply system: water wells, water meters, a raw water reservoir and the Osage water treatment plant. -Groundwater pipeline infrastructure: John C. Williams Aqueduct & Wellfield – Phase I & II: a fifty square mile well field, a pipeline to deliver water to the Authority's existing aqueduct, 2 transmission pump stations, groundwater wells, 2 well field pump stations, groundwater monitoring wells, well field collection and transmission piping. It also included a new well field electrical distribution and access road systems, as well as a SCADA system to interact with the Authority's existing system (https://crmwa.com/john-c-williams-aqueduct-wellfield-phase-i-ii). <p>The existing water related infrastructure is in good condition. No potential exposure to extreme events (refer to indicator 1.2.1: City of Amarillo 21921.docx):</p> <ul style="list-style-type: none"> -Pipes could freeze if cold (rare), Amarillos pipes are 4 feet below surface. -Drought is a seasonal extreme event. The water storage tank and a back up water line is available in the case of an emergency. -Tornadoes cannot impact water infrastructure. <p>No planned water-related infrastructure in the following years, just the regular maintenance (replacing the water meters: https://www.amarillo.gov/departments/water-utilities/watermeter).</p> <p>This information was verified during the stakeholder interview with the city of Amarillo.</p>	
1.5.7	<p><i>The adequacy of available WASH services within the catchment shall be identified.</i></p>	 Yes

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000667

Comment The city of Amarillo is in charge of the production and distribution of drinking water and also of the wastewater collection. The following links provide information related to WASH services:

-<https://www.amarillo.gov/departments/planning-and-development-services/amarillo-water-utilities/water-distribution/-fsiteid-1>
 -<https://www.amarillo.gov/departments/planning-and-development-services/amarillo-water-utilities/wastewater-collection/-fsiteid-1>
 -<https://www.amarillo.gov/departments/planning-and-development-services/amarillo-water-utilities/wastewater-treatment/-fsiteid-1>

The CCR Report (refer to indicator 1.3.4: 2022 CCR Amarillo.pdf: <https://www.amarillo.gov/home/showpublisheddocument/32011/637897826835800000>) shows no issues with access to water is occurring in the catchment.

Homes that are outside of the city and are unable to use the city sewage by law have their own septic tank:
<https://www.amarillo.gov/departments/community-services/environmental-health/on-site-sewage-facility#:~:text=Title%2030%20of%20the%20Texas%20Administrative%20Code%20Chapter,700%20septic%20systems%20within%20Potter%20and%20Randall%20Counties.>

The water risk level has been identified as low-medium level (refer to indicator 1.4.1:Amarillo TX WASH map 1.4.1.png).

During the stakeholder interview with the city of Amarillo, the city confirmed that approximately 100 % of the population has access to 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.*



Comment The site has identified the following shared water challenges (Shared water challenges.png):

- Water Quantity: aquifer depletion due to pumping that exceeds recharge. The regional surface water supply has steadily decreased over the past 10-15 years to the extent that regional lakes experienced new historical low storage levels.
- Water Quality: surface water and groundwater quality: nutrient concentrations, total dissolved solids, and metals. TDS and metals have been attributed to geologic location and nutrient concentrations due to historical treated wastewater effluent used for irrigation.
- Water Governance: discussion with city and Tyson on increasing water cost. The Amarillo Complex is one of the highest (10-12%) total water usage.
- Important Water-Related Areas: Production methods allows nutrients to be pulled out of the soils and bound into the plant roots up to 4-6 months. The new crops Tyson would be able to get 2-4 cuttings (Harvests) per year instead of 1 cutting a year. Since this finding, Tyson has installed new groundwater monitoring wells south east of the playa.

All the shared water-related challenges are prioritized at the same time.

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







Comment Initiatives to address the shared water challenges have been identified (Initiatives 1.png; Initiatives 2.png).

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.*

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000667

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>	 Yes
Comment	<p>Water risks have been identified and prioritized, including likelihood and severity of impact within a given timeframe, potential costs and business impact (R&O Table_v3.xlsx). The risk score is explained in the "Key" spread sheet.</p> <p>The risks have been clasified as: physical, regulatory and reputational risks.</p> <p>**The evidence provided for this indicator is confidential information**</p>	
1.7.2	<i>Water-related opportunities shall be identified, including how the site may participate, assessment and prioritization of potential savings, and business opportunities.</i>	 Yes
Comment	<p>Water-related opportunities have been identified, including how the site may participate, assessment (colum l) and prioritization of potential savings and business impact (refer to indicator 1.7.1: R&O Table_v3.xlsx).</p> <p>**The evidence provided for this indicator is confidential information**</p>	
1.8	<i>Understand best practice towards achieving AWS outcomes: Determining sectoral best practices having a local/catchment, regional, or national relevance.</i>	
1.8.1	<i>Relevant catchment best practice for water governance shall be identified.</i>	 Yes
Comment	<p>Relevant catchment best practice for water governance has been identified (Water governance best practice.png):</p> <p>Based on the 2021 Panhandle Regional Water Plan - Volume 1, Ch. 5B.3, p.426 Ch. 8 (refer to indicator 1.5.1:RegionA_2021RWP_V1.pdf):</p> <p>It is recommended for industrial water users to focus conservation activities on:</p> <ul style="list-style-type: none"> -Evaluation of water saving equipment and processes. -Water rate structures that discourage water waste. -Regulatory: continue to evaluate the rules governing reuse to encourage the use of wastewater effluent. -Legislative: evaluate policy barriers to use paya lakes for conservation purposes. -In FY22-FY24, the complex is undergoing new construction which will improve efficiency goals in water and energy. 	
1.8.2	<i>Relevant sector and/or catchment best practice for water balance (either through water efficiency or less total water use) shall be identified.</i>	 Yes


CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000667


Comment The site identified the following relevant sector/catchment best practice for water balance (Water balance best practice 1.png; Water balance best practice 2.png):

- Water Conservation by 2030 (long-term 2070) - Panhandle regional water plan - p. 229: "Water conservation is a valued water management strategy in the PWPA because it helps prolong the limited water resources in the region", 2021 Regional Water Plan: <https://www.panhandlewater.org/region-a-pwpg/regional-water-plans> (refer to indicator 1.5.1:RegionA_2021RWP_V1.pdf). The site has identified different activities to actively pursuing water conservation goals, some examples are:
- Maintenance team performs walk through's daily to identify leaks.
- Upper management discusses water management practices, performance, modifying equipment, identifying efficiencies with nozzles and attachments on the line, and motion shut off timers on equipment.
- Water reuse cabinet.
- Water softener, bead replacement reducing CIP flushings.
- The site monitors a water intensity goal.

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 practice for water quality including rationale for data source (Water quality best practice.png):

- Wastewater Reuse - Panhandle regional water plan -p229 Section 5A.1.2: "Wastewater reuse utilizes treated wastewater effluent as either a replacement for a potable water supply (potable reuse) or utilizes treated wastewater that has been returned to a water supply resource (indirect)" (evidence provided for indicator 1.5.1: Panhandle Water Planning Group (PWPG), Region A, 2021: <https://www.panhandlewater.org/region-a-pwpg/regional-water-plans> (RegionA_2021RWP_V1.pdf; RegionA_2021RWP_V2.pdf). The site has identified different activities to implement management practices for water quality:
- Provide a farm manager to service the needs of Amarillo's contracted farmers with fertilizer management strategies, provide wastewater, from the plant operations, for free to reuse for agricultural irrigation. This form of wastewater reuse is supported in the catchment water plan, this strategy protects the limited aquifer resource, removing need for commercial fertilizer and provides an avenue to grow a crop for yield to profitable margins.
- The plant team members with Tyson's farmer consultants (stakeholder table) monitor year over year land application reports for quantifying nutrient management at a soil level and reducing over application of wastewater byproducts.
- The plant team members utilize new groundwater monitoring wells to ensure "Playa Lake" infrastructure maintains its integrity and does not cause seepage into groundwater beyond the fence line.
- On-site water management initiatives: the farm manager samples the irrigation water daily and weekly to be analyzed. The sample analysis is returned for monitoring.
- Water quality test for boilers and cooling towers (done by a contractor)(PSR - Tyson Amarillo Slaughter Processing - 091923.pdf).

1.8.4 *Relevant catchment best practice for site maintenance of Important Water-Related Areas shall be identified.* 
Yes


CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000667

Comment The site identified the following catchment best practices for site and catchment maintenance of Important Water-Related Areas (IWRA's best practice.png):




- Water Quantity BMPs: the plant resides over the southern portion of the Ogallala Aquifer. This area of the U.S. largest aquifer has little to no water availability below the plant. With recent observation, in 2022 and 2023 Tyson will seek a plausible concentrated area within the fence line to drill either a domestic, irrigation, or multiple interceptor wells. The Texas Water Development Board designates water rights to every user.
- Water Quality BMPs: the site is continuing to follow a new implementation plan at the farm site and managing sludge from the plant to ensure the playa lake levels are maintained. Tyson continues to use a groundwater monitoring plan (1.3.4) with quarterly samples.
- The farm manager manages the use of irrigation water on farm property with contracted farm managers. Soil samples, and playa lake samples are routinely conducted to manage land application rates, the farm does not use freshwater from any wells.

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 identified the following as relevant sector and/or catchment best practice for site provision of equitable and adequate WASH:

- Hand sanitizer stations are available for team members outside the interior plant including hand washing stations inside the floor.
- Signs are available to team members on how to properly sanitize hands.
- Water bottle filters are available at water fountains to team members to fill up personal water bottles.
- The plant has on-site Food Safety Quality Assurance managers to monitor drinking, water, boot sanitizers, chemicals, etc. in the facility.

Audit Number: AO-000667

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	<p><i>A signed and publicly disclosed site statement OR organizational document shall be identified. The statement or document shall include the following commitments:</i></p> <ul style="list-style-type: none"> <i>- That the site will implement and disclose progress on water stewardship program(s) to achieve improvements in AWS water stewardship outcomes</i> <i>- That the site implementation will be aligned to and in support of existing catchment sustainability plans</i> <i>- That the site's stakeholders will be engaged in an open and transparent way</i> <i>- That the site will allocate resources to implement the Standard.</i> 	 Yes
Comment	<p>A signed site commitment to water stewardship by the Plant Manager and the Tannery Manager has been identified (CWT Signature page.pdf).</p> <p>This commitment is publicly disclosed internally. The auditor checked this during the on-site audit.</p>	
2.2	<i>Develop and document a process to achieve and maintain legal and regulatory compliance.</i>	
2.2.1	<p><i>The system to maintain compliance obligations for water and wastewater management shall be identified, including:</i></p> <ul style="list-style-type: none"> <i>- Identification of responsible persons/positions within facility organizational structure</i> <i>- Process for submissions to regulatory agencies.</i> 	 Yes
Comment	<p>The site has an online portal system (e-CAT) to track compliance and regulatory tasks. Environmental Managers have access to the tasked labeled with timecards based on the facilities environmental program. Tasks are assigned with responsible personnel listed and authorized by the Complex Environmental Manager including a time stamp (E-Cat.png; Water Ecat.png).</p> <p>The environmental manager is in charge of the process for submissions to regulatory agencies (Regulatory system 2.png; WW EQPS-2023.pdf).</p> <p>The site has identified responsible persons/positions within facility organizational structure (Regulatory system 1.png).</p>	
2.3	<i>Create a water stewardship strategy and plan including addressing risks (to and from the site), shared catchment water challenges, and opportunities.</i>	
2.3.1	<i>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.</i>	 Yes

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000667

Comment The site has identified a strategy including the mission, vision and goals (Strategy 1.png, Strategy 2.png; Tyson Water Risk Assessment V2.pptx):


-The mission to water stewardship is the site's Water Position Statement demonstrating why water is a vital resource:
https://www.tysonfoods.com/sites/default/files/2023-04/Water_Position_Statement.pdf

-The vision: the site is focused on the 2 % water consumption in Direct Operations and its commodities team is focusing within the Supply Chain (98% consumption) with the launch of its Climate-Smart Beef Program:
https://www.tysonfoods.com/sites/default/files/2023-09/Tyson_ESG_Report_2022.pdf

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 6 targets linked with the 5 AWS outcomes (WSP.png; Water Stewardship Plan_v4.xlsx):


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 (where available). Best practice are shown as "Best Management Practice".

Short-term targets to meet 1, 5, 10 year goals are identified in Step 3 (refer to indicators 3.1.1 Good catchment governance 1.png; 3.1.1 Good catchment governance 2.png; 3.3.1 Water Balance 1.png; 3.3.1 Water Balance 2.png; 3.3.1 Water Balance 3.png; 3.4.1 Water Quality 1.png; 3.4.1 Water Quality 2.png; 3.4.1 Water Quality 3.png; 3.5.1 IWRA'S.png; 3.6.1 WASH 1.png; 3.6.1 WASH 2.png).

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

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000667

Comment A plan to mitigate/adapt water risks developed in co-ordination with relevant public-sector has been identified: National Water Reuse Action Plan (national-water-reuse-action-plan-collaborative-implementation-version-1.pdf) and also the Emergency Action Plan from indicator 1.3.1 (FY23 Amarillo Emergency Action Plan.docx). Both plans are described as follows:

-National Water Reuse Action Plan: "This Action Plan promotes a growing collaboration among federal, state, local and private sector reuse efforts. It seeks to identify and address the critical technology, policy, and programmatic issues we face as a nation to enhance the security, sustainability, and resilience of our water resources through enhanced consideration of reuse". Tyson Foods is part of the Action Leaders and Partners.

-Emergency Action Plan: this includes how the site will respond to emergencies of: fire, ammonia/chemical release, severe weather, workplace violence, severe injury, and power outage. Different public sector and infrastructure agencies/authorities are involved.

The plant's plan is to upgrade their complex to current standards to mitigate risk in all Environmental, Social, and Governance related outcomes. The site will continue to aim to lower the water intensity of its operation. A water intensity goal can be used to work with the Region A available water supply projection by providing more water for other demands in the watershed.

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)





Audit Number: AO-000667

3	STEP 3: IMPLEMENT - Implement the site's stewardship plan and improve impacts	
3.1	<i>Implement plan to participate positively in catchment governance.</i>	
3.1.1	<i>Evidence that the site has supported good catchment governance shall be identified.</i>	 Yes
Comment	<p>Evidence that the site has supported good catchment governance has been identified (3.1.1 Good catchment governance 1.png; 3.1.1 Good catchment governance 2.png).</p> <p>Some examples of ongoing activities are:</p> <ul style="list-style-type: none"> -Work with the state of Texas and USDA in further reuse of wastewater (FINAL_2021_WSWC_WaterReuseReport.pdf). -Attend educational EPA webinars/wastewater training (EXTERNAL - Thank You for Attending the 18th Annual EPA Drinking Water Workshop!.msg). -Purchase RO systems to ensure neighbors around the Tyson complex are provided quality drinking water from the Ogallala in their homes (RO Systems - Robertson & Aguirre Households.msg). 	
3.1.2	<i>Measures identified to respect the water rights of others including Indigenous peoples, that are not part of 3.2 shall be implemented.</i>	 Yes
Comment	<p>The site ensures compliance with human rights by complying all the water related laws/regulations. The site does not have relevant water violations (U.S. EPA Enforcement and Compliance History Online website: https://echo.epa.gov/detailed-facility-report?fid=110009497785).</p> <p>There are not indigenous people in the area.</p>	
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>The site has an online portal system (e-CAT) to track compliance and regulatory tasks. Environmental Managers have access to the tasked labeled with timecards based on the facilities environmental program. Tasks are assigned with responsible personnel listed and authorized by the Complex Environmental Manager including a time stamp (refer to indicator 2.2.1: E-Cat.png; Water Ecat.png).</p> <p>The site submits a TRI report to EPA and TCEQ annually. This is an annual summary of Toxic Release Inventory is a resource for learning about toxic chemical releases and pollution prevention activities reported by industrial facilities. This is a federal and state requirement (Amarillo Tyson TRI Workbook RY2022 6_13_23.xlsx).</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	<p>The site does not have water rights as part of its legal and regulatory requirements. The water is provided by the city of Amarillo (refer to evidence provided for indicator 3.2.1: 3.2.1 & 3.2.2.png).</p>	
3.3	<i>Implement plan to achieve site water balance targets.</i>	

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000667

3.3.1	<i>Status of progress towards meeting water balance targets set in the water stewardship plan shall be identified.</i>	 Yes
Comment	<p>Status of progress towards meeting water balance targets have been identified (3.3.1 Water Balance 1.png; 3.3.1 Water Balance 2.png; 3.3.1 Water Balance 3.png).</p> <p>Some examples of ongoing activities are:</p> <ul style="list-style-type: none"> -Continue maintenance checks for leaks: RE_ water work orders.msg. -Work with Tyson farmers and farmers in community to implement best management practices: added a new biosolid hauler -a local contractor (refer to evidence provided for indicator 3.4.1: Tyson - Services Scope of Work Amarillo.docx - signed.pdf). Ongoing discussion with contracted farmers and TCEQ (refer to 1.3.4 and all land application and groundwater monitoring reports). -Achieve maximum feasible water reuse in facility after confirmation of receipt from other Tyson Fresh Meat locations undergoing EPA USDA sampling (tysonupdate20230615.pptx: Microbial Data; FW EXTERNAL - WRAP Quarterly Update - April 2021.msg). -Update water balance spreadsheet: (refer to indicator 1.3.3). -Identify cost effective water savings solutions for facility: upgrading the complex water infrastructure of the harvest floor (refer to indicator 1.1.1 Infrastructure of new area.jpeg). -Monitor the Edwards Aquifer level to determine viability of installing a groundwater well for the farm: ongoing efforts with potential adding well on NE side of Amarillo into Dockum aquifer. As of 4/2022, CEM met with water district to determine well viability and meeting their roles and requirements, request pricing from consultant (Amarillo_catchment well level 092021.png). -Continue tracking facility water balance: FY23 Amarillo Water Balance Tracking.xlsx. -Annually update gallons processed/head (higher/lower) on an intensity scale: FY22 Water Use and Goals.xlsx; FY23 Water Use and Goals.xlsx. -Report water usage to Texas Water Development Board annually: FinalWaterUseSurvey 2-9-2022 2.55.08 PM.pdf; FinalWaterUseSurvey 2-14-2023 9.03.20 AM.pdf. -Review opportunities for water reuse within Tyson of Amarillo: refer to indicator 1.3.7, approved CIR project list (Water-related Cost 2020-2022.xlsx). 	
3.3.2	<i>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.</i>	 Yes
Comment	<p>The site has water intensity goals and monthly tracks water gallons used/production volume (gal/lb) (refer to indicator 3.3.1: FY22 Water Use and Goals.xlsx; FY23 Water Use and Goals.xlsx).</p> <p>Water usage is adjusted based on the customer product. For example: a new customer order arrived in one week, and required the plant to use more hot water while processing the specific product.</p>	
3.3.3	<i>Legally-binding documentation, if applicable, for the re-allocation of water to social, cultural or environmental needs shall be identified.</i>	 Yes
Comment	<p>The site does not have a legally binding document for reallocation of water to social, cultural and environmental needs.</p>	
3.4	<i>Implement plan to achieve site water quality targets</i>	
3.4.1	<i>Status of progress towards meeting water quality targets set in the water stewardship plan shall be identified.</i>	 Yes

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000667

Comment Status of progress towards meeting water quality targets have been identified (3.4.1 Water Quality 1.png; 3.4.1 Water Quality 2.png; 3.4.1 Water Quality 3.png).

Some examples of activities are:

- Assess monitoring wells and groundwater well : refer to indicator 1.1.1:Tyson Amarillo GW Monitoring Plan 2020 Final_.pdf and 1.3.4: Tyson Fresh Meats, Inc. - Amarillo, TX.pdf.
- Track Playa Lake water quality samples prior going to pivot: Summary 2021-2022.xlsx, Summary 2018-2019.xlsx; water quality parameters of Playa Lake for 2022 and July 2023 were quantified in Amarillo Weekly Wastewater Reports (refer to indicator 1.3.4: 7-7-23.pdf; 7-14-23.pdf; 7-23-23.pdf;10-1-22.pdf;10-8-22.pdf; 10-15-22.pdf).
- Assess wastewater lagoons (6 total): ampl_July_2023.xlsx.
- Track daily lost product: the Amarillo plant takes hourly samples daily to determine lost product (product being lost in the drains) throughout production. This allows better understanding of what the influent loadings into WWTP: Monthly Recap - Complex-2023.xlsx; Lost Product Tracking.xlsx.
- Speak with farmers and biosolid management companies to determine who will handle biosolids (goal completed in 2 years and updated water plan in FY23): Tyson - Services Scope of Work Amarillo.docx - signed.pdf.
- Drill monitoring wells to assess playa lake and groundwater water quality: completed by 2021.
- Develop new nutrient management plan at an annual occurrence: refer to indicator 1.3.1:Tyson Nitrogen Report.pdf; Tyson N Budget.pdf.
- Fund neighbors with RO systems in their household: refer to evidence provided for indicator 3.1.1: RO Systems - Households.msg.

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.

Beyond legal parameters the site tracks Playa Lake water quality samples prior going to pivots: refer to evidence provided for indicator 3.4.1: Summary 2021-2022.xlsx, Summary 2018-2019.xlsx; water quality parameters of Playa Lake for 2022 and July 2023 were quantified in Amarillo Weekly Wastewater Reports (refer to indicator 1.3.4: 7-7-23.pdf; 7-14-23.pdf; 7-23-23.pdf;10-1-22.pdf;10-8-22.pdf; 10-15-22.pdf).

Also the site assess the wastewater lagoons (refer to indicator 3.4.1: ampl_July_2023.xlsx). Biogas is generated in the lagoons and it's used as fuel for the boilers on-site (WastewaterReport-02-2022.xlsx).

Important to ensure that the improvement is not only to comply with legality, but to improve the parameters.



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

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)





Audit Number: AO-000667

Comment	<p>The site has set 2 direct activities to maintain and/or enhance the IWRA's (3.5.1 IWRA'S.png):</p> <ul style="list-style-type: none"> -Identified farmers and biosolid management companies to determine who will handle biosolid from farm land : closed by 2022, evidence provided for indicator 3.4.1: Tyson - Services Scope of Work Amarillo.docx. -Identified potential area NE of farm to utilize groundwater as fresh irrigation water: ongoing discussion to determine viability of groundwater well to Dockum aquifer, task identified in water balance target 3.3.1. Provide greater opportunity for plant uptake and growth. <p>Some other activities set for the water balance and water quality targets are linked with the IWRA's (refer to indicators 3.3.1 and 3.4.1):</p> <ul style="list-style-type: none"> -Develop new nutrient management plan at an annual occurrence: the site will be planting new crop production moving forward to improve nutrient uptake throughout the growing seasons. This allows nutrients to be pulled out of the soils and bound into the plant roots up to 4-6 months. The new crops Tyson would be able to get 2-4 cuttings (Harvests) per year instead of 1 cutting a year. -Assess monitoring wells and groundwater well: the site has installed new groundwater monitoring wells south east of the Playa Lake. -Review opportunities for water reuse within Tyson of Amarillo: Outside the fence line: Support City of Amarillo by conserving water, using water more efficiently within the fence line, resulting in a reduce withdrawal from Ogallala aquifer. Inside the fence line: reduce cost of water by using water more efficiently, and provide irrigation water (free) at the Amarillo farm. 	
3.6	<p><i>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.</i></p>	
3.6.1	<p><i>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.</i></p>	 Obs.
Comment	<p>The site's provision of adequate access to safe drinking water, effective sanitation, and protective hygiene (WASH) for all workers onsite has been identified (3.6.1 WASH 1.png; 3.6.1 WASH 2.png, refer to indicator 1.3.8 for more details):</p> <ul style="list-style-type: none"> -Meet the following regulation: 29 CFR 1910,141 : ongoing, no violations: The Amarillo Complex has not been cited in violated of the regulation. -The City of Amarillo samples incoming water once a year: refer to evidence provided for indicator 1.3.4. -Post and ensure hand washing education signs in restroom facilities: verified during the on-site audit. -Install hand sterilization equipment at door: new construction, on wall outside door. -Maintain water filter/water bottle stations near break rooms. -Budget for reverse osmosis systems to neighbors (refer to indicator 3.1.1: RO Systems - Households.msg). <p>The site has quantified the locker rooms (RE_ Processing Locker Rooms.msg).</p> <p>Quantifying the site's WASH facilities would further strengthen conformity for the indicator, including the number of water supply (fountains, ice machines, water filters), toilets, and hygiene stations (including showers, hand sanitizer stations, and eyewashing) available in each of the site's buildings, and the ratio of staff per facility provided.</p>	
3.6.2	<p><i>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.</i></p>	 Yes

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)




Audit Number: AO-000667

Comment	Amarillo does not have any indigenous communities (3.6.2.png). The site is not impinging on the human right to safe water and sanitation of communities through their operations.	
	The site is in compliance with water use and water discharge regulations.	
3.7	<i>Implement plan to maintain or improve indirect water use within the catchment:</i>	
3.7.1	<i>Evidence that indirect water use targets set in the water stewardship plan, as applicable, have been met shall be quantified.</i>	 Yes
Comment	At this time the site is not setting an indirect water use target (3.7.1.png).	
	Tyson currently follows targets utilizing direct water usage, and continue seeking improvements in the embedded water from raising livestock, and feeding animals (Climate-Smart Beef Program announcement: https://www.tysonfoods.com/climate-smart-beef-program). Tyson seeks to build partnership with its Top 5 producers facilitating cattle to the complex. The partnership will allow a transparent beginning to end supply chain partnerships to combat climate and embedded water -related risk (Position Statement_V6.docx; refer to indicator 1.4.1: Tyson Water Risk Assessment V2.pptx).	
	Tyson cannot demand targets to be met with producers as this is a breach of farmer freedom.	
3.7.2	<i>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.</i>	 Yes
Comment	No concerns for indirect water usage of off-site laundry services (refer to indicators 1.4.1, 1.4.2).	
	Currently, Tyson Amarillo does not have concern for delivery of the embedded water use for electrical services. The plant does not maintain a site specific indirect water usage target in energy consumption. As construction is completed, the plant will seek opportunities to conserve energy in an effort to drive efficiencies and target CO2e reductions as part of the enterprise target, "Net Zero by 2050".	
	As of 08/2023, the site collects biogas at the wastewater lagoons.	
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	The site shares Playa Lake with farmers.	
	Evidence of engagement has been identified (3.8.1 a.png; 3.8.1 b.png; 3.8.1 c.png; _EXTERNAL PARTNER_ - METER READING.msg; _EXTERNAL_ - Re_ _EXT_ RE_ Amarillo Soil Report.msg; _EXTERNAL_ - Re_ soil probes.msg).	
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

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)


Audit Number: AO-000667

Comment	<p>Some actions implemented by the site towards achieving best practice related to water governance are (3.9.1.png):</p> <ul style="list-style-type: none"> -Evaluation of water saving equipment and processes: the plant continues to evaluate water efficiency equipment (refer to indicator 3.3.1). -In FY22-FY24, the complex is undergoing new construction which will improve efficiency goals in water and energy. 	
3.9.2	<p><i>Actions towards achieving best practice, related to targets in terms of water balance shall be implemented.</i></p>	 Yes
Comment	<p>Implementation of good practices and improvements to reduce water consumption (refer to evidence provided for indicator 3.3.1).</p> <p>The site monitors a water intensity goal. By setting a water intensity goal the site in the panhandle of Texas is able to identify key areas to become more water efficient at meat processing while continuing to meet food safety regulations</p>	
3.9.3	<p><i>Actions towards achieving best practice, related to targets in terms of water quality shall be implemented.</i></p>	 Yes
Comment	<p>Some implemented actions towards achieving best practice in terms of water quality are (refer to evidence provided for indicators 1.3.4, 1.8.3 and 3.4.1):</p> <ul style="list-style-type: none"> -The site monitors the playa and re-considering its application plan of treated wastewater effluent. -Provide a farm manager to service the needs of Amarillo's contracted farmers with fertilizer management strategies, provide wastewater, from the plant operations, for free to reuse for agricultural irrigation. This form of wastewater reuse is supported in the catchment water plan, this strategy protects the limited aquifer resource, removing need for commercial fertilizer and provides an avenue to grow a crop for yield to profitable margins. -The plant team members with Tyson's farmer consultants (stakeholder table) monitor year over year land application reports for quantifying nutrient management at a soil level and reducing over application of wastewater byproducts. -The plant team members utilize new groundwater monitoring wells to ensure "Playa Lake" infrastructure maintains its integrity and does not cause seepage into groundwater beyond the fence line. -On-site water management initiatives: the farm manager samples the irrigation water daily and weekly to be analyzed. The sample analysis is returned for monitoring. -Water quality test for boilers and cooling towers. 	
3.9.4	<p><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></p>	 Yes
Comment	<p>Implementation of best practice in terms of maintenance of Important Water-Related Areas (refer to evidence provided for indicator 3.3.1, 3.4.1 and 3.5.1):</p> <ul style="list-style-type: none"> -Water Quantity BMPs: the plant resides over the southern portion of the Ogallala Aquifer. This area of the U.S. largest aquifer has little to no water availability below the plant. With recent observation, in 2022 and 2023 Tyson will seek a plausible concentrated area within the fence line to drill either a domestic, irrigation, or multiple interceptor wells. As of August 2023, future plans to use a new groundwater well for the farm has not been decided or budgeted for. The Texas Water Development Board designates water rights to every user. -Water Quality BMPs: the site is continuing to follow a new implementation plan at the farm site and managing sludge from the plant to ensure the playa lake levels are maintained. Tyson continues to use a groundwater monitoring plan (1.3.4) with quarterly samples. -The farm manager manages the use of irrigation water on farm property with contracted farm managers. Soil samples, and playa lake samples are routinely conducted to manage land application rates, the farm does not use freshwater from any wells. 	

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000667

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

Comment Implemented actions towards achieving best practice in terms of WASH are (refer to indicators 3.1.1 and 3.6.1):

- Hand sanitizer stations are available for team members outside the interior plant including hand washing stations inside the floor.
- Signs are available to team members on how to properly sanitize hands.
- Water bottle filters are available at water fountains to team members to fill up personal water bottles.
- The plant has on-site Food Safety Quality Assurance managers to monitor drinking, water, boot sanitizers, chemicals, etc. in the facility.
- Budget for reverse osmosis systems to neighbors.

All these actions were verified during the on-site audit.

Audit Number: AO-000667

4 STEP 4: EVALUATE - Evaluate the site's performance.	
4.1	<i>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.</i>
4.1.1	<i>Performance against targets in the site's water stewardship plan and the contribution to achieving water stewardship outcomes shall be evaluated.</i>
Comment	<p>An annual evaluation of the WSP will be conducted for the Complex Environmental Manager and the Sustainability Associate.</p> <p>The site has implemented a document for evaluation of each outcome "FY23 Annual Review.docx."</p>
4.1.2	<i>Value creation resulting from the water stewardship plan shall be evaluated.</i>
Comment	<p>The site has presented one document that includes the value creation for the site and the shared value benefits for the catchment divided in: economic, social and environmental value (The value of water management_Amarillo.docx).</p>
4.1.3	<i>The shared value benefits in the catchment shall be identified and where applicable, quantified.</i>
Comment	<p>The shared value benefits in the catchment have been identified (refer to indicator 4.1.2).</p> <p>Also, the reverse osmosis project with neighbors demonstrates a shared value input for the catchment.</p>
4.2	<i>Evaluate the impacts of water-related emergency incidents (including extreme events), if any occurred, and determine the effectiveness of corrective and preventative measures.</i>
4.2.1	<i>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.</i>
Comment	<p>There has not been emergency incidents in 2022 or so far in 2023.</p> <p>In the event of an emergency, the plant will refer to the Emergency Management Plan identified in indicator 1.3.1.</p>
4.3	<i>Evaluate stakeholders' consultation feedback regarding the site's water stewardship performance, including the effectiveness of the site's engagement process.</i>
4.3.1	<i>Consultation efforts with stakeholders on the site's water stewardship performance shall be identified.</i>
Comment	<p>Consultation efforts with stakeholders on the site's water stewardship performance has been identified (4.3.1 document. Amarillo 2023.docx; 4.3.1.png; FW Water Rates_engagement.msg, refer to evidence provided for indicator 3.8.1).</p> <p>Every year, targets will be evaluated to determine if all stakeholders are helping to meet the Amarillo complex goal. Resulting activities may or may not be adjusted to facilitate improvements the following year.</p>

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000667

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.*



Comment The site had not made any changes to the plan since this was developed; however on September 20th, 2023 during the on-site audit, the site made some changes to the plan. These are shown in 2 different versions of the plan.

Water Stewardship Plan_v3.xlsx: first version.
Water Stewardship Plan_v4.xlsx: updated version.

Audit Number: AO-000667

5 STEP 5: COMMUNICATE & DISCLOSE - Communicate about water stewardship and disclose the site's stewardship efforts	
5.1	<i>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.</i>
5.1.1	<i>The site's water-related internal governance, including positions of those accountable for compliance with water-related laws and regulations shall be disclosed.</i> ✔ Yes
Comment	<p>The site compliance is monitored by the complex environmental manager (CEM). Usually the plant manager is ultimately responsible for environmental compliance, but in Amarillo, the tannery manager combines these efforts (5.1.png; 5.1.1.png). The contact details of the CEM is available on an internal whiteboard of the site, this was verified during the on-site audit (refer to indicator 5.2.1: FY23 Water Stewardship Announcement_final.docx).</p> <p>Internal governance is provided publicly throughout the locations permitting process (Tier-II-Paper-Report-for-2023-02-23-1677174592069.pdf; refer to indicator 1.3.1: FY23 Amarillo Emergency Action Plan.docx.). Tyson's Environmental Strategy is described under Environmental Governance and Environmental Management System (EMS) in the enterprise public-facing website. If requested, Tyson will make information about water-related positions available, as it relates to the site water stewardship objectives and action plan.</p>
5.2	<i>Communicate the water stewardship plan with relevant stakeholders.</i>
5.2.1	<i>The water stewardship plan, including how the water stewardship plan contributes to AWS Standard outcomes, shall be communicated to relevant stakeholders.</i> ↗ in progress
Comment	<p>The site provided evidence of internal communication (FY23 Water Stewardship Announcement_final.docx.), the Sustainability Report 2022 (https://www.tysonfoods.com/sites/default/files/2023-09/Tyson_ESG_Report_2022.pdf) and a public third-party disclosure (https://www.tysonfoods.com/sites/default/files/2023-08/Water%20Security%202023.pdf).</p> <p>However, the evidence provided is for internal stakeholders and the information that is publicly available is general. The interviewed stakeholders don't have the knowledge about the water stewardship plan and there is not evidence of this disclosure with them.</p> <p style="text-align: right;">Finding No: TNR-006168</p>
5.3	<i>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.</i>
5.3.1	<i>A summary of the site's water stewardship performance, including quantified performance against targets, shall be disclosed annually at a minimum.</i> ✔ Yes
Comment	<p>"Amarillo Complex_onepager announcement 2022.final.docx" shows a summary of the water stewardship performance including quantification.</p> <p>This information has been disclosed on an internal whiteboard of the site, this was verified during the on-site audit.</p>
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>

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000667

5.4.1 *The site's shared water-related challenges and efforts made to address these challenges shall be disclosed.* 🚩
in progress

Comment The evidence provided shows efforts on individual actions taken to address the shared water challenges, however, the site's shared water challenges that were identified in Criterion 1.6. and efforts made to address them have not been disclosed.

Finding No: TNR-006058

5.4.2 *Efforts made by the site to engage stakeholders and coordinate and support public-sector agencies shall be identified.* ✅
Yes

Comment The Amarillo complex continues to engage with local stakeholders to maintain operations in Amarillo, Texas. Progress is delivered by a multi-group collaboration between Tysons corporate commodity, procurement, live operations, and internal plant working streams (refer to evidence provided for indicator 5.4.1).

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 There has not been any water-related compliance violations made by the site (U.S. EPA Enforcement and Compliance History Online website: <https://echo.epa.gov/detailed-facility-report?fid=110009497785>).

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

Comment There are not corrective actions taken because the site hasn't made 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 Refer to indicator 5.5.1

Photographic Evidence from Audit

✅
Yes

Comment No photographic evidence was provided as it's confidential.