

Tyson Foods, Inc. - Water 2018

W0. Introduction

W0.1

(W0.1) Give a general description of and introduction to your organization.

Tyson Foods Inc. (NYSE: TSN) is one of the world's largest food companies and a recognized leader in protein. Founded in 1935 by John W. Tyson and grown under three generations of family leadership, the company has a broad portfolio of products and brands like Tyson®, Jimmy Dean®, Hillshire Farm®, Ball Park®, Wright®, Aidells®, ibp® and State Fair®. Tyson Foods innovates continually to make protein more sustainable, tailor food for everywhere it's available and raise the world's expectations for how much good food can do. Headquartered in Springdale, Arkansas, the company had 122,000 team members at September 30, 2017. Through its Core Values, Tyson Foods strives to operate with integrity, create value for its shareholders, customers, communities and team members and serve as a steward of the animals, land and environment entrusted to it.

Please note: the reporting period end date was changed from 9/30/17 to 10/1/17 to comply with CDP's ORS requirement of providing a start date that is 364-367 days before the end date. However, Tyson Foods' fiscal year is 10/02/16 to 9/30/17.

W-FB0.1a

(W-FB0.1a) Which activities in the food, beverage, and tobacco sector does your organization engage in?

- Agriculture
- Processing/Manufacturing
- Distribution

W0.2

(W0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date
Reporting year	October 2 2016	October 1 2017

W0.3

(W0.3) Select the countries/regions for which you will be supplying data.

- United States of America

W0.4

(W0.4) Select the currency used for all financial information disclosed throughout your response.

- USD

W0.5

(W0.5) Select the option that best describes the reporting boundary for companies, entities, or groups for which water impacts on your business are being reported.

Companies, entities or groups over which operational control is exercised

W0.6

(W0.6) Within this boundary, are there any geographies, facilities, water aspects, or other exclusions from your disclosure?

Yes

W0.6a

(W0.6a) Please report the exclusions.

Exclusion	Please explain
International Operations (outside U.S.)	Data for our international (outside US) operations is not available at this time. We are currently evaluating our management practices and partnerships in other countries to identify how to collect this information in the future.
Other	This footprint includes data from our U.S.-based operations. Information from our U.S.-based Cobb-Vantress, The Pork Group, hog buying stations or AdvancePierre Foods facilities are not included in this footprint. FY2015 data is based on a 53-week fiscal year. FY2016 and FY2017 are based on a 52-week fiscal year.

W1. Current state

W1.1

(W1.1) Rate the importance (current and future) of water quality and water quantity to the success of your business.

	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Vital	Important	Water is the foundation of our food production operations, and we recognize water of suitable quality and volume is a finite resource. Success in this area requires a holistic approach to water stewardship beginning with the responsible use of this resource in our operations.
Sufficient amounts of recycled, brackish and/or produced water available for use	Important	Important	We consider recycled water important but not vital to our business or our supply chain. We seek opportunities to use recycled water where feasible in our operations and supply chain in alignment with our commitment to water stewardship. In accordance with USDA regulations, use of recycled water in food processing plants is currently limited to non-food contact applications. Outside of plant operations, we focus on beneficial re-use of recycled water. For example, in Fiscal 2017 our Pasco, Washington; Holcomb, Kansas; and Madison, Nebraska, Fresh Meats plants reused more than two billion gallons of wastewater for crop irrigation. This conserves water and allows the nutrients in wastewater to be used to grow crops and reduce the need to purchase manufactured commercial fertilizer.

W-FB1.1a

(W-FB1.1a) Which water-intensive agricultural commodities that your organization produces and/or sources are the most significant to your business by revenue? Select up to five.

Agricultural commodities	% of revenue dependent on these agricultural commodities	Produced and/or sourced	Please explain
Cattle products	21-40	Sourced	We participate in the open commodity market with our own set of regionally based cattle buyers. We negotiate our purchases with cattle feeders ranging from feedlots with thousands of head of cattle to small farming operations with just a few head of cattle. We do not own any cattle or feeding operations. Therefore, these animals are fed by independent farmers before being purchased by Tyson Foods for harvest. According to research from Water Footprint Network, 98% of the water associated with raising animals (not specific to cattle) is associated with growing the grain fed to them.
Soy	21-40	Sourced	As a vertically integrated poultry company, we operate feed mills to produce scientifically formulated feeds for our broiler chickens and turkeys. Corn and soybean meal are the primary raw materials used to produce feed. We procure corn and soybean meal on the commodity market. According to research from Water Footprint Network, 98% of the water associated with raising animals (not specific to chicken or turkeys) is associated with growing the grain fed to them.
Other, please specify (Chicken products)	21-40	Produced	There are seven stages in producing chicken for consumers including breeder flock, pullet farm, breeder house, hatchery, broiler farm, processing/further-processing, and distribution. As a vertically integrated poultry company, we own each step of this process with the exception of the independent broiler chicken farmers who are independent contractors. We operate feed mills that produce scientifically formulated feeds for our chickens. Corn and soybean meal are two of the primary ingredients in chicken feed. According to research from Water Footprint Network, 98% of the water associated with raising animals (not specific to chicken) is associated with growing the grain fed to them. Once the chickens are ready to harvest, they are transported to one of our harvesting plants where we convert them into food products. Food safety and quality is our top priority and water is essential to producing safe food. We aim to balance responsible water stewardship with protecting the quality and safety of our products.
Other, please specify	Please select	Please select	
Other, please specify	Please select	Please select	

W1.2

(W1.2) Across all your operations, what proportion of the following water aspects are regularly measured and monitored?

	% of sites/facilities/operations	Please explain
Water withdrawals – total volumes	76-99	Tyson has implemented a third-party billing system and uses internal tracking mechanisms that provides access to water withdrawal data information for our US facilities.
Water withdrawals – volumes from water stressed areas	1-25	We use the WRI Aqueduct tool to evaluate which plants are in water stressed areas. For this exercise we have selected the plants which are considered to be at overall high risk based on the output from the tool.
Water withdrawals – volumes by source	76-99	We have an understanding for almost all locations of the water source. Some municipal sources use a combination of surface and ground water sources, and these cannot always be separated by volume.
Produced water associated with your metals & mining sector activities - total volumes	<Not Applicable>	<Not Applicable>
Produced water associated with your oil & gas sector activities - total volumes	<Not Applicable>	<Not Applicable>
Water withdrawals quality	76-99	As a food company, and because our team members drink the water supplied in our plants, all water entering the plant must meet USEPA Primary Drinking Water Standards. If the water is withdrawn on Tyson property and treated by Tyson for use within the plant, the general water quality parameters are known in order to facilitate proper treatment to meet the previously mentioned drinking water Standards.
Water discharges – total volumes	76-99	For locations where Tyson holds a wastewater discharge permit from a state agency, water discharge is measured as part of the permit conditions. For discharges to municipal systems, some systems monitor discharge flow. For those that do not, a conservative estimate can be made from the incoming water volume.
Water discharges – volumes by destination	76-99	Water discharged either goes to a Tyson treatment facility, or to a municipal treatment system. We know which plants discharge to each type of location.
Water discharges – volumes by treatment method	76-99	This represents all of our full treatment facilities (36) where we regularly monitor flow and quality prior to discharge. The remainder of our facilities (55) discharge to municipal treatment facilities.
Water discharge quality – by standard effluent parameters	76-99	100% of our US facilities are required to report discharge quality data to local and/or state regulatory bodies on a regular basis.
Water discharge quality – temperature	1-25	Two Tyson locations are required by their regulatory permits to monitor waste water discharge temperatures. We do not monitor waste water discharge temperatures at our other facilities.
Water consumption – total volume	76-99	We calculate our total water consumption at 100% of our US facilities (total withdrawals – total discharge). We are in the process of surveying our US facilities to better understand how water consumption data is measured and recorded by source.
Water recycled/reused	Less than 1%	At our Pasco, Washington; Holcomb, Kansas; and Madison, Nebraska plants, we reused more than 2 billion gallons of wastewater for crop irrigation. More than 3 million pounds of nutrients were collected and redistributed by beneficial soil irrigation practices through this process.
The provision of fully-functioning, safely managed WASH services to all workers	76-99	100% of our US facilities provide WASH services to all workers. This is an OSHA regulatory requirement.

W1.2b

(W1.2b) What are the total volumes of water withdrawn, discharged, and consumed across all your operations, and how do these volumes compare to the previous reporting year?

	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Total withdrawals	120727	About the same	Water withdrawals were about the same in 2017 as they were in 2016 (118,702 megaliters). Tyson produced an additional 603MM lbs of product in 2017, while increasing total water withdrawals by only 1,986 megaliters. Our water use intensity remained essentially flat year over year.
Total discharges	117168	About the same	Water discharges were about the same in 2017 as they were in 2016 (115,183 megaliters). All water discharged either goes to a Tyson treatment facility, or to a municipal treatment system.
Total consumption	3559	About the same	Water consumption was about the same in 2017 as it was in 2016 (3,520 megaliters). We are in the process of surveying our US facilities to better understand how water consumption data is measured and recorded by source.

W1.2d

(W1.2d) Provide the proportion of your total withdrawals sourced from water stressed areas.

	% withdrawn from stressed areas	Comparison with previous reporting year	Identification tool	Please explain
Row 1	3.9	This is our first year of measurement	WRI Aqueduct	There are three high risk plants - Madison NE, Joslin, IL, and Bruss Chicago. Water usage for those three plant in FY17 was 1,216,128,552 gallons. Total company usage was 31,452,321,534 gallons. Percent of use by the 3 plants is 3.9%.

W-FB1.2e

(W-FB1.2e) For each commodity reported in question W-FB1.1a, do you know the proportion that is produced/sourced from water stressed areas?

Agricultural commodities	The proportion of this commodity produced in water stressed basins is known	The proportion of this commodity sourced from water stressed basins is known	Please explain
Cattle products	Not applicable	No, not currently but we intend to collect this data within the next two years	For the plants located in high water stressed areas, we can calculate the proportion of product produced by those plants. For livestock and grain sourcing, we are working with World Resources Institute to gather and evaluate this information.
Soy	Not applicable	No, not currently but we intend to collect this data within the next two years	For the plants located in high water stressed areas, we can calculate the proportion of product produced by those plants. For livestock and grain sourcing, we are working with World Resources Institute to gather and evaluate this information.
Other commodities from W-FB1.1a, please specify (Chicken products)	No, not currently but we intend to obtain this data within the next two years	Not applicable	For the plants located in high water stressed areas, we can calculate the proportion of product produced by those plants. For livestock and grain sourcing, we are working with World Resources Institute to gather and evaluate this information.

W1.2h

(W1.2h) Provide total water withdrawal data by source.

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water, including rainwater, water from wetlands, rivers, and lakes	Not relevant	<Not Applicable>	<Not Applicable>	Tyson does not withdrawal water from fresh surface water, including rainwater, water from wetlands, rivers, and lakes for its operations.
Brackish surface water/seawater	Not relevant	<Not Applicable>	<Not Applicable>	Tyson does not withdrawal water from brackish surface water/seawater for its operations.
Groundwater – renewable	Relevant	26560	About the same	Groundwater withdrawals in 2017 were about the same as 2016 groundwater withdrawals of 28,106 megaliters.
Groundwater – non-renewable	Not relevant	<Not Applicable>	<Not Applicable>	Tyson does not withdrawal water from non-renewable groundwater for its operations.
Produced water	Not relevant	<Not Applicable>	<Not Applicable>	Tyson does not withdrawal water from produced water for its operations.
Third party sources	Relevant	94167	About the same	Third party source withdrawals in 2017 were about the same as 2016 third party source withdrawals of 90,596 megaliters, which is about the same as 2017.

W1.2i

(W1.2i) Provide total water discharge data by destination.

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water	Relevant	53897	About the same	Fresh surface water discharge in 2017 was about the same as the 2016 value of 51,445 megaliters.
Brackish surface water/seawater	Not relevant	<Not Applicable>	<Not Applicable>	Tyson does not discharge water from its operations to brackish surface water/seawater.
Groundwater	Relevant	15232	About the same	Groundwater discharge in 2017 was about the same as the 2016 value of 15,218 megaliters.
Third-party destinations	Relevant	48039	About the same	Third-party destination discharges in 2017 were about the same as the 2016 value of 48,520 megaliters.

W1.2j

(W1.2j) What proportion of your total water use do you recycle or reuse?

	% recycled and reused	Comparison with previous reporting year	Please explain
Row 1	Less than 1%	This is our first year of measurement	At our Pasco, Washington; Holcomb, Kansas; and Madison, Nebraska plants, we reused more than 2 billion gallons of wastewater for crop irrigation. More than 3 million pounds of nutrients were collected and redistributed by beneficial soil irrigation practices through this process. This was our first year of measuring this data.

W-FB1.3

(W-FB1.3) Do you collect/calculate water intensity for each commodity reported in question W-FB1.1a?

Agricultural commodities	Water intensity information for this produced commodity is collected/calculated	Water intensity information for this sourced commodity is collected/calculated	Please explain
Cattle products	Not applicable	No, not currently but we intend to collect/calculate this data within the next two years	We are working with World Resources Institute to gather and evaluate this information.
Soy	Not applicable	No, not currently but we intend to collect/calculate this data within the next two years	We are working with World Resources Institute to gather and evaluate this information.
Other commodities from W-FB1.1a, please specify (Chicken products)	Yes	Not applicable	Water intensity information for chicken products produced is collected and calculated.

W-FB1.3a

(W-FB1.3a) Provide water intensity information for each of the agricultural commodities identified in W-FB1.3 that you produce.

Agricultural commodity

Other produced commodities from W-FB1.3, please specify (Chicken products)

Water intensity value

1.27

Numerator: water aspect

Freshwater withdrawn

Denominator: unit of production

Other, please specify (Pounds)

Comparison with previous reporting year

This is our first year of measurement

Please explain

Intensity is calculated by taking the total freshwater withdrawn divided by pounds of water produced. This is our first year of measuring water intensity information.

W1.4

(W1.4) Do you engage with your value chain on water-related issues?

No, not currently but we intend to within two years

W1.4d

(W1.4d) Why do you not engage with any stages of your value chain on water-related issues and what are your plans?

	Primary reason	Please explain
Row 1	We are planning to do so within the next two years	We recognize the importance of water management in both our direct operations and supply chain. In FY16, we launched an initiative to better understand sustainability related risks and opportunities within our business with the intent of establishing strategies and programs to strengthen our social and environmental performance, including performance related to water management. As part of this initiative as well as our deeper commitment to sustainable food production, we announced in May 2017 a collaboration with the World Resources Institute (WRI) to become an industry leader by setting outcome-based as well as context-based water conservation targets for our operations and our supply chain. We anticipate announcing the results of this collaboration in 2018.

W2. Business impacts

W2.1

(W2.1) Has your organization experienced any detrimental water-related impacts?

Yes

W2.1a

(W2.1a) Describe the water-related detrimental impacts experienced by your organization, your response, and total financial impact.

Country/Region

United States of America

River basin

Sabine River

Type of impact driver

Physical

Primary impact driver

Pollution incident

Primary impact

Fines, penalties or enforcement orders

Description of impact

Exceeded permitted effluent limitations. Penalty and SEP in equal amounts.

Primary response

Pollution abatement and control measures

Total financial impact

40425

Description of response

We worked with the City to put a routine maintenance plan in place to help reduce unstable water conditions and prevent the accumulation of disinfection byproducts.

W2.2

(W2.2) In the reporting year, was your organization subject to any fines, enforcement orders, and/or other penalties for water-related regulatory violations?

Yes, fines, enforcement orders or other penalties but none that are considered as significant

W2.2a

(W2.2a) Provide the total number and financial value of all water-related fines.

Row 1

Total number of fines

4

Total value of fines

75085

% of total facilities/operations associated

1.3

Number of fines compared to previous reporting year

Higher

Comment

Unfortunately, issues related to water occasionally arise and we work to address them as quickly as possible and put corrective measures in place to prevent a reoccurrence.

W3. Procedures

W-FB3.1

(W-FB3.1) How does your organization identify and classify potential water pollutants associated with its food, beverage, and tobacco sector activities that could have a detrimental impact on water ecosystems or human health?

The primary pollutant attributed to global meat industry activities is nutrient runoff. Nutrients flowing into streams, rivers, and the ocean from agriculture and wastewater stimulate an overgrowth of algae which can have a negative effect on aquatic ecosystems. Tyson encourages farmers to implement optimized nutrient management practices in order to reduce nutrient loads on aquatic ecosystems. We understand that the world needs a more sustainable food system, predicated on improved land and fertilizer management, and it's up to companies like Tyson to set the pace with bold goals that help protect the planet while also enabling us to feed a growing world. As such, Tyson has committed to support improved environmental practices on two million acres of corn by the end of 2020, which is the largest-ever land stewardship commitment by a U.S. protein company. This two-million acre commitment will encourage grain farmers to adopt more efficient fertilizer practices, and take additional measures to reduce water runoff and soil loss.

W-FB3.1a

(W-FB3.1a) Describe how your organization minimizes the adverse impacts of potential water pollutants on water ecosystems or human health associated with your food, beverage, and tobacco sector activities.

Potential water pollutant

Other, please specify (Nutrients)

Activity/value chain stage

Agriculture – supply chain

Description of water pollutant and potential impacts

Nutrients are used in the production of grains to ensure they receive enough nutrients for optimized growth. Tyson Foods does not own grain farms but buys corn and soybeans to feed its poultry. It also buys cattle and hogs from farmers and ranchers who use grain to feed their animals. Nutrients which are not properly managed can make their way into streams, rivers, and the ocean and stimulate an overgrowth of algae, which can have a negative effect on aquatic ecosystems.

Management procedures

Soil conservation practices

Other, please specify (Nutrient management)

Please explain

Tyson encourages farmers to implement efficient land and nutrient management practices. Tyson Foods has made a commitment to support improved environmental practices on two million acres of corn by the end of 2020. To reach the land stewardship target, we are engaging the broader allied industry in establishing criteria that result in meaningful outcomes. We are also working with multiple organizations to develop programs to encourage corn farmers to adopt practices that optimize soil health, and that reduce fertilizer use and soil loss. We are collaborating with various environmental groups, such as the Nature Conservancy and others, as well as academic experts to validate our approach and progress made. We look forward to updating you, our stakeholders, on our progress when we have more to share.

W3.3

(W3.3) Does your organization undertake a water-related risk assessment?

Yes, water-related risks are assessed

W3.3a

(W3.3a) Select the options that best describe your procedures for identifying and assessing water-related risks.

Direct operations

Coverage

Partial

Risk assessment procedure

Water risks are assessed as a standalone issue

Frequency of assessment

Not defined

How far into the future are risks considered?

>10 years

Type of tools and methods used

Tools on the market

Other

Tools and methods used

WRI Aqueduct

Internal company methods

External consultants

Comment

In 2014, the University of Arkansas prepared a Geographic Water Risk Assessment for our US-based facilities. We completed a review of water usage, infrastructure, conservation practices, and scarcity risks at our US operations to help ensure we have a complete picture of the current operational sustainability of our company's water supplies. In FY2016, an Origin Green Ambassador helped us re-evaluate water risks within our U.S. direct operations as well as our poultry supply chain.

Supply chain

Coverage

Partial

Risk assessment procedure

Water risks are assessed as a standalone issue

Frequency of assessment

Not defined

How far into the future are risks considered?

>10 years

Type of tools and methods used

Tools on the market

Other

Tools and methods used

WRI Aqueduct

Internal company methods

External consultants

Comment

In FY16 and into FY17, we launched an initiative to better understand sustainability related risks and opportunities within our business with the intent of strengthening our social and environmental performance, including performance related to water management. As part of this initiative we maintain a collaboration with the World Resources Institute to become an industry leader by setting outcome-based as well as context-based water conservation targets for our operations and our supply chain.

Other stages of the value chain

Coverage

None

Risk assessment procedure

<Not Applicable>

Frequency of assessment

<Not Applicable>

How far into the future are risks considered?

<Not Applicable>

Type of tools and methods used

<Not Applicable>

Tools and methods used

<Not Applicable>

Comment

W3.3b

(W3.3b) Which of the following contextual issues are considered in your organization's water-related risk assessments?

	Relevance & inclusion	Please explain
Water availability at a basin/catchment level	Relevant, always included	The 2014 University of Arkansas Water Risk Assessment evaluated water availability and quality parameters at our US –based facilities. We completed a review of water usage, infrastructure, conservation practices, and scarcity risks at our US operations to help ensure we have a complete picture of the current operational sustainability of our company's water supplies.
Water quality at a basin/catchment level	Relevant, always included	In the late summer/early fall FY16 and into FY17, we launched an initiative to better understand sustainability related risks and opportunities within our business with the intent of establishing strategies and programs to strengthen our social and environmental performance, including performance related to water management. As part of this initiative as well as our deeper commitment to sustainable food production, we maintain a collaboration with the World Resources Institute to become an industry leader by setting outcome-based as well as context-based water conservation targets for our operations and our supply chain. These targets will be inclusive of both water availability and quality. We anticipate announcing the results of this collaboration in the fall of 2018.
Stakeholder conflicts concerning water resources at a basin/catchment level	Relevant, not included	We actively monitor water risks at our US operations and are actively engaging with local communities and stakeholders to reduce our impact on water resources, and to collaborate on projects to ensure the longevity of water resources. Although this is not actively included in our water risk assessment, it is regularly monitored by our facilities and our corporate team.
Implications of water on your key commodities/raw materials	Relevant, not included	Our first priority is to ensure the wholesomeness and safety of our food products, and water is essential to producing safe food. We recognize water of suitable quality and volume is a finite resource. We also understand the important balance between protecting product quality and conserving a natural resource. Tyson has focused on ways to conserve and reuse water in its processing plants over the years. The company formed a Water Council with help from the University of Arkansas in 2013 to understand the current landscape for water management for global operations and to create short-term and long-term plans for water management across the company. Since the council's creation, Tyson has developed water usage and management metrics and continues to work on other tools to conserve water.
Water-related regulatory frameworks	Relevant, always included	Our US-based facilities for processing chicken, beef, pork, turkey and prepared foods, milling feed and housing live chickens and swine are subject to a variety of federal, state and local environmental laws and regulations, which include provisions relating to the discharge of materials into the environment and generally provide for protection of the environment. Tyson Foods maintains an Electronic Compliance Assurance Toolset (eCAT) system that is designed to: • Track regulatory and company required environmental tasks; • Highlight receipt of environmental awards and recognition; • Archive details on accidental environmental releases; • Automatically generate escalating e-mail notifications to multiple layers of management if environmental tasks are not managed in a timely manner; and • Capture information and tasks resulting from regulatory agency visits. We also provide access to electronic copies of permit documents and information via our internal SharePoint platform.
Status of ecosystems and habitats	Not considered	Although our water risk assessment does not evaluate current status of ecosystems and habitats at a local level, we are actively collaborating with local stakeholder groups and non-governmental organizations to develop best management practices for water use and conservation to ensure quality of water resources and ecosystems in our areas of operation. For example, in FY15 we created a collaboration with and gave a grant to The Nature Conservancy that will go toward conserving water quality in streams and lakes throughout northwest Arkansas and southwest Missouri.
Access to fully-functioning, safely managed WASH services for all employees	Not relevant, explanation provided	We currently provide fully-functioning WASH services to employees at all of our US-based locations. This is not anticipated to become relevant to water-related risk assessment in the future.
Other contextual issues, please specify	Not considered	Not applicable.

W3.3c

(W3.3c) Which of the following stakeholders are considered in your organization's water-related risk assessments?

	Relevance & inclusion	Please explain
Customers	Relevant, always included	Our water risk assessment process is focused on our US operations and currently does not extend to our value chain or customers. Although not specifically targeted in our water risk assessment, we engage with our customers in virtually every aspect of our operations and business transactions and are attuned to their concerns and interests, including aspects of our environmental performance and management. For example, customers were interviewed during our 2017 Materiality Assessment, in which water was ranked as a material issue.

	Relevance & inclusion	Please explain
Employees	Relevant, not included	Although employees were not incorporated into the water risk assessment process, the results of the water risk assessment have been used to inform plant managers of potential water risks and foster discussion on water initiatives at a facility level. As part of our 2017 Materiality Assessment, we conducted interviews with key internal decision makers to inform the “importance to business” ratings. Additionally, we conducted an on-line survey of internal employees and asked them to rank the issues of greatest importance and concern to them. Water management was a highly ranked sustainability issue in our Materiality Assessment. Additionally, in FY2016, we announced a 12 percent water reduction goal by the end of 2020 for our direct operations.
Investors	Relevant, always included	Tyson is aware of the information investors are seeking on the water risks of our operations. Our 2014 University of Arkansas Water Risk Assessment, our FY17 sustainability report, and the 2017 CDP Water response reflect these information requests. Our 2017 Materiality Assessment was a stakeholder engagement exercise designed to identify environmental, social, and governance issues that could potentially impact our business and stakeholders. Additionally, in FY2016, we announced a 12 percent water reduction goal by the end of 2020 for our direct operations. In the late summer/early fall FY16 and into FY17, we launched an initiative to better understand sustainability related risks and opportunities within our business with the intent of establishing strategies and programs to strengthen our social and environmental performance, including performance related to water management. As part of this initiative as well as our deeper commitment to sustainable food production, we maintain a collaboration with the World Resources Institute to become an industry leader by setting outcome-based as well as context-based water conservation targets for our operations and our supply chain. We anticipate announcing the results of this collaboration in the fall of 2018.
Local communities	Relevant, always included	We actively monitor water risks at our US operations and are actively engaging with local communities and stakeholders to reduce our impact on water resources, and to collaborate on projects to ensure the longevity of water resources. We engage with local communities on aspects of water stewardship via strategic community involvement plans, donations, community outreach, environmental management systems, partnerships and sponsorships.
NGOs	Relevant, always included	Tyson acknowledges the interest that NGOs have in water risks, the role they play in addressing water risks, and the importance of collaboration and partnerships for water stewardship initiatives and opportunities. Although not specifically included in our 2014 Water Risk Assessment, we are actively collaborating with local stakeholder groups and non-governmental organizations to develop best management practices for water use and conservation to ensure quality of water resources and longevity of watersheds and river basins in our areas of operation. For example, we continue to collaborate with The Nature Conservancy to support projects intended to conserve water quality in rivers and streams throughout Northwest Arkansas and Southwest Missouri. The projects include stream restoration, reforestation, erosion prevention, unpaved road improvements, watershed research and community engagement in conservation projects throughout the area, including the Kings, Elk and the Buffalo National River.
Other water users at a basin/catchment level	Relevant, always included	Our U.S.-based operations are regularly in contact with local regulators, agricultural users, and other water users to inform them about issues of water use, quality, availability, and wastewater discharge. Although not specifically included in our 2014 Water Risk Assessment, information from these engagements is used in our greater enterprise risk management process.
Regulators	Relevant, always included	Water is the foundation of our food production operations, and we recognize water of suitable quality and volume is a finite resource. Success in this area requires a holistic approach to water stewardship beginning with the responsible use of this resource at our operations, including compliance with regulatory discharge permits and applicable regulations. Compliance with these laws and regulations, and the ability to comply with any modifications to these laws and regulations, is material to our business.
River basin management authorities	Relevant, not included	Although river basin management authorities were not specifically included in our 2014 Water Risk Assessment, we are actively collaborating with local stakeholder groups and non-governmental organizations to develop best management practices for water use and conservation to ensure quality of water resources and longevity of watersheds and river basins in our areas of operation. For example, we continue to support efforts by The Nature Conservancy’s Arkansas Chapter including a grant and volunteer support to help the chapter complete a significant stream bank restoration in the Oxbow section of the Kings River, monitor sediment reduction, and survey a tributary and plan its restoration. The support also includes projects on the Elk River and enrolling conservation easements in Arkansas’ Buffalo National River watershed.
Statutory special interest groups at a local level	Relevant, always included	Although statutory special interest groups at a local level were not specifically included in our 2014 Water Risk Assessment, we are actively collaborating with local stakeholder groups and non-governmental organizations to develop best management practices for water use and conservation to ensure quality of water resources and longevity of watersheds and river basins in our areas of operation. We also engage with several trade associations on aspects of statutory interest.
Suppliers	Relevant, not included	Our 2014 Water Risk Assessment was focused on our US-based operations and did not evaluate supplier risk. However, in the late summer/early fall FY16 and into FY17, we launched an initiative to better understand sustainability related risks and opportunities within our business with the intent of establishing strategies and programs to strengthen our social and environmental performance, including performance related to water management. As part of this initiative as well as our deeper commitment to sustainable food production, we maintain a collaboration with the World Resources Institute to become an industry leader by setting outcome-based as well as context-based water conservation targets for our operations and our supply chain. We anticipate announcing the results of this collaboration in the fall of 2018.
Water utilities at a local level	Relevant, not included	Although water utilities and suppliers at a local level were not specifically included in our 2014 Water Risk Assessment, we are actively collaborating with local stakeholder groups and non-governmental organizations to develop best management practices for water use and conservation to ensure quality of water resources and longevity of watersheds and river basins in our areas of operation. Our operations are in regular contact with local water utilities to manage water availability and quality, as well as water discharge requirements.
Other stakeholder, please specify	Not considered	Not applicable.

(W3.3d) Describe your organization's process for identifying, assessing, and responding to water-related risks within your direct operations and other stages of your value chain.

In the late summer/early fall FY16 and into FY17, we launched an initiative to better understand sustainability related risks and opportunities within our business with the intent of establishing strategies and programs to strengthen our social and environmental performance, including performance related to water management. As part of this initiative as well as our deeper commitment to sustainable food production, we maintain a collaboration with the World Resources Institute to become an industry leader by setting outcome-based as well as context-based water conservation targets for our operations and our supply chain. We anticipate announcing the results of this collaboration in the fall of 2018.

W4. Risks and opportunities

W4.1

(W4.1) Have you identified any inherent water-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes, only within our direct operations

W4.1a

(W4.1a) How does your organization define substantive financial or strategic impact on your business?

Tyson Foods, Inc. does not have a comprehensive definition of “substantive impact,” though, as a publicly-traded company, Tyson Foods, Inc. is subject to various regulatory and contractual standards related to the measurement, reporting, and disclosure of impacts to the company's business. Many of these standards are financial- and/or risk-based and are publicly available. We are committed to the responsible management of our water resources, and acknowledge that significant changes in water availability could have an impact on our company and supply chain. We recognize water of suitable quality and volume is a finite resource. That's why, we maintain a goal to reduce the amount of water used to produce each pound of product by 12%, by the end of 2020, using Fiscal 2015 as the baseline year. In addition, we announced in May 2017 a collaboration with the World Resources Institute (WRI) to become an industry leader by setting outcome- based water conservation targets for our operations and our supply chain. We anticipate announcing the results of this collaboration in 2018.

W4.1b

(W4.1b) What is the total number of facilities exposed to water risks with the potential to have a substantive financial or strategic impact on your business, and what proportion of your company-wide facilities does this represent?

	Total number of facilities exposed to water risk	% company-wide facilities this represents	Comment
Row 1	3	1-25	We are currently collaborating with the World Resources Institute (WRI) in conducting a Water Risk Assessment. As part of this risk assessment we conducted an analysis of water risk and scarcity across our direct operations and our supply chain in the United States using the WRI Aqueduct tool. Three facilities were identified to be in high-risk areas.

W4.1c

(W4.1c) By river basin, what is the number and proportion of facilities exposed to water risks that could have a substantive impact on your business, and what is the potential business impact associated with those facilities?

Country/Region

United States of America

River basin

Mississippi River

Number of facilities exposed to water risk

3

% company-wide facilities this represents

1-25

Production value for the metals & mining activities associated with these facilities

<Not Applicable>

% company's annual electricity generation that could be affected by these facilities

<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities

<Not Applicable>

% company's total global revenue that could be affected

1-25

Comment

We are still working to fully understand the risks; using global water tools this basin has been identified as under water stress.

W4.2

(W4.2) Provide details of identified risks in your direct operations with the potential to have a substantive financial or strategic impact on your business, and your response to those risks.

Country/Region

United States of America

River basin

Mississippi River

Type of risk

Physical

Primary risk driver

Increased water stress

Primary potential impact

Increased operating costs

Company-specific description

Using WRI's Aqueduct tool, it was determined that three facility's overall water risks were identified as high-risk based on the combination of 3 categories – Physical risk, Regulatory risk, and Reputational & markets risk. The physical risk identified is related to water stress due to the increasingly unfavorable ratio of withdrawal compared total available renewable supply.

Timeframe

More than 6 years

Magnitude of potential impact

Medium-low

Likelihood

Likely

Potential financial impact

Explanation of financial impact

Increased cost of water supply.

Primary response to risk

Adopt water efficiency, water re-use, recycling and conservation practices

Description of response

We recognize water of suitable quality and volume is a finite resource. Our goal is to reduce the amount of water used to produce each pound of product by 12%, by the end of 2020, using Fiscal 2015 as the baseline year. In addition, in Fiscal 2016, we launched an initiative to better understand sustainability related risks and opportunities within our business with the intent of establishing strategies and programs to strengthen our social and environmental performance, including performance related to water management. As part of this initiative as well as our deeper commitment to sustainable food production, we announced in May 2017 a collaboration with the World Resources Institute (WRI) to become an industry leader by setting outcome-based water conservation targets for our operations and our supply chain. We anticipate announcing the results of this collaboration in 2018.

Cost of response

Explanation of cost of response

Country/Region

United States of America

River basin

Mississippi River

Type of risk

Regulatory

Primary risk driver

Higher water prices

Primary potential impact

Increased operating costs

Company-specific description

Using WRI's Aqueduct tool, it was determined that three facility's overall water risks were identified as high-risk based on the combination of 3 categories – Physical risk, Regulatory risk, and Reputational & markets risk. The regulatory risk identified was related to higher water prices which could lead to increased operating costs.

Timeframe

More than 6 years

Magnitude of potential impact

Medium-low

Likelihood

Likely

Potential financial impact

Explanation of financial impact

Increased cost of water supply.

Primary response to risk

Adopt water efficiency, water re-use, recycling and conservation practices

Description of response

We recognize water of suitable quality and volume is a finite resource. Our goal is to reduce the amount of water used to produce each pound of product by 12%, by the end of 2020, using Fiscal 2015 as the baseline year. In addition, in Fiscal 2016, we launched an initiative to better understand sustainability related risks and opportunities within our business with the intent of establishing strategies and programs to strengthen our social and environmental performance, including performance related to water management. As part of this initiative as well as our deeper commitment to sustainable food production, we announced in May 2017 a collaboration with the World Resources Institute (WRI) to become an industry leader by setting outcome-based water conservation targets for our operations and our supply chain. We anticipate announcing the results of this collaboration in 2018.

Cost of response

Explanation of cost of response

Country/Region

United States of America

River basin

Mississippi River

Type of risk

Reputation & Markets

Primary risk driver

Increased stakeholder concern or negative stakeholder feedback

Primary potential impact

Increased operating costs

Company-specific description

Using WRI's Aqueduct tool, it was determined that three facility's overall water risks were identified as high-risk based on the combination of 3 categories – Physical risk, Regulatory risk, and Reputational & markets risk. The reputational and markets risk identified was related to increased stakeholder concern or negative stakeholder feedback which could result in increased operating costs.

Timeframe

More than 6 years

Magnitude of potential impact

Medium-low

Likelihood

Likely

Potential financial impact

Explanation of financial impact

Increased cost of water supply

Primary response to risk

Adopt water efficiency, water re-use, recycling and conservation practices

Description of response

We recognize water of suitable quality and volume is a finite resource. Our goal is to reduce the amount of water used to produce each pound of product by 12%, by the end of 2020, using Fiscal 2015 as the baseline year. In addition, in Fiscal 2016, we launched an initiative to better understand sustainability related risks and opportunities within our business with the intent of establishing strategies and programs to strengthen our social and environmental performance, including performance related to water management. As part of this initiative as well as our deeper commitment to sustainable food production, we announced in May 2017 a collaboration with the World Resources Institute (WRI) to become an industry leader by setting outcome- based water conservation targets for our operations and our supply chain. We anticipate announcing the results of this collaboration in 2018.

Cost of response

Explanation of cost of response

W4.2c

(W4.2c) Why does your organization not consider itself exposed to water risks in its value chain (beyond direct operations) with the potential to have a substantive financial or strategic impact?

	Primary reason	Please explain
Row 1	Evaluation in progress	We are committed to the responsible management of our water resources, and acknowledge that significant changes in water availability could have an impact on our company and supply chain. For example, significant changes in water availability could result in plant relocations, closure or reduced capacity; curtailment of operations due to interruptions in water availability; financial investments in water management/recycling/reuse technologies beyond those currently in place; increased cost for municipal water; or increased cost for raw materials or lack of a supply of raw materials. In the late summer/early fall FY16 and into FY17, we launched an initiative to better understand sustainability related risks and opportunities within our business with the intent of establishing strategies and programs to strengthen our social and environmental performance, including performance related to water management. As part of this initiative as well as our deeper commitment to sustainable food production, we maintain a collaboration with the World Resources Institute to become an industry leader by setting outcome-based as well as context-based water conservation targets for our operations and our supply chain. We anticipate announcing the results of this collaboration in the fall of 2018.

W4.3

(W4.3) Have you identified any water-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes, we have identified opportunities, and some/all are being realized

W4.3a

(W4.3a) Provide details of opportunities currently being realized that could have a substantive financial or strategic impact on your business.

Type of opportunity

Efficiency

Primary water-related opportunity

Improved water efficiency in operations

Company-specific description & strategy to realize opportunity

Tyson Foods has a goal to reduce water usage in its direct U.S.-based operations by 12% by 2020, compared to a 2015 baseline. This goal encourages all facilities to reduce water usage which will improve water efficiency and deliver cost savings to the business. This proactive approach to water management could result in cost savings and improved water efficiency as well as strengthen our reputation with internal and external stakeholders.

Estimated timeframe for realization

1 to 3 years

Magnitude of potential financial impact

Low

Potential financial impact

5600000

Explanation of financial impact

A reduction in our intensity will ultimately save us on our gallons used assuming production is flat. Cost computed based on well vs city usage.

Type of opportunity

Other

Primary water-related opportunity

Other, please specify (Supply chain efficiency)

Company-specific description & strategy to realize opportunity

In FY16, we launched an initiative to better understand sustainability related risks and opportunities within our business with the intent of establishing strategies and programs to strengthen our social and environmental performance, including performance related to water management. As part of this initiative as well as our deeper commitment to sustainable food production, we announced in May 2017 a collaboration with the World Resources Institute (WRI) to become an industry leader by setting outcome-based water conservation targets for our operations and our supply chain. We anticipate announcing the results of this collaboration in 2018. We continue our conservation efforts with the Nature Conservancy's Arkansas Chapter. Over the last two years, including FY16, we have granted and provided volunteer support to help the chapter complete a significant stream bank restoration in the Oxbow section of the Kings River, monitor sediment reduction, and survey a tributary and plan its restoration. The support also includes projects on the Elk River and enrolling conservation easements in Arkansas' Buffalo National River watershed. Tyson employees have also been actively engaged in this partnership by supporting various on-the-ground conservation projects such as tree plantings, stream clean-ups, and water awareness learning centers.

Estimated timeframe for realization

Current - up to 1 year

Magnitude of potential financial impact

Low

Potential financial impact

0

Explanation of financial impact

No financial impacts identified as part of this collaboration, until specific opportunities are explored.

Type of opportunity

Markets

Primary water-related opportunity

Improved community relations

Company-specific description & strategy to realize opportunity

We continue our conservation efforts with the Nature Conservancy’s Arkansas Chapter. Over the last two years, including FY16, we have granted and provided volunteer support to help the chapter complete a significant stream bank restoration in the Oxbow section of the Kings River, monitor sediment reduction, and survey a tributary and plan its restoration. The support also includes projects on the Elk River and enrolling conservation easements in Arkansas’ Buffalo National River watershed. Tyson employees have also been actively engaged in this partnership by supporting various on-the-ground conservation projects such as tree plantings, stream clean-ups, and water awareness learning centers.

Estimated timeframe for realization

1 to 3 years

Magnitude of potential financial impact

Low

Potential financial impact

0

Explanation of financial impact

No financial impacts identified as part of this collaboration, until specific opportunities are explored.

Type of opportunity

Resilience

Primary water-related opportunity

Resilient to future regulatory changes

Company-specific description & strategy to realize opportunity

While our compliance with water quality regulations isn’t voluntary, as regulatory agencies continue to increase their focus on nutrient discharges we encounter more stringent limits via our wastewater discharge permits. Subsequently, we continue to apply technologies, strategies and processes to reduce nutrient levels in our surface water discharges. This creates cleaner water, and lessens pressure on existing water supply quality. In turn, this has potential to benefit our company by lowering our water supply risk.

Estimated timeframe for realization

4 to 6 years

Magnitude of potential financial impact

Low

Potential financial impact

0

Explanation of financial impact

No financial savings identified, rather only the cost of implementation which has not yet been quantified.

W5. Facility-level water accounting

W5.1

(W5.1) For each facility referenced in W4.1c, provide coordinates, total water accounting data and comparisons with the previous reporting year.

Facility reference number

Facility 1

Facility name (optional)

Joslin, IL

Country/Region

United States of America

River basin

Mississippi River

Latitude

41.5542

Longitude

-90.2246

Primary power generation source for your electricity generation at this facility

<Not Applicable>

Oil & gas sector business division

<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

2924

Comparison of withdrawals with previous reporting year

Lower

Total water discharges at this facility (megaliters/year)

3126

Comparison of discharges with previous reporting year

About the same

Total water consumption at this facility (megaliters/year)

202

Comparison of consumption with previous reporting year

Much lower

Please explain

Our water withdrawal as compared to FY16 decreased approximately 8%, Our discharge remained largely unchanged from the prior year, decreasing only slightly by around 1%.

Facility reference number

Facility 2

Facility name (optional)

Chicago, IL

Country/Region

United States of America

River basin

Mississippi River

Latitude

41.9452

Longitude

-87.7372

Primary power generation source for your electricity generation at this facility

<Not Applicable>

Oil & gas sector business division

<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

51

Comparison of withdrawals with previous reporting year

About the same

Total water discharges at this facility (megaliters/year)

51

Comparison of discharges with previous reporting year

About the same

Total water consumption at this facility (megaliters/year)

0

Comparison of consumption with previous reporting year

About the same

Please explain

Our water withdrawal as compared to FY16 increased by approximately 3%, Our discharge remained largely unchanged from the prior year, increasing by only 3%.

Facility reference number

Facility 3

Facility name (optional)

Madison, NE

Country/Region

United States of America

River basin

Mississippi River

Latitude

41.8185

Longitude

-97.4678

Primary power generation source for your electricity generation at this facility

<Not Applicable>

Oil & gas sector business division

<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

1625

Comparison of withdrawals with previous reporting year

About the same

Total water discharges at this facility (megaliters/year)

1313

Comparison of discharges with previous reporting year

About the same

Total water consumption at this facility (megaliters/year)

312

Comparison of consumption with previous reporting year

About the same

Please explain

Our water withdrawal as compared to FY16 increased by approximately 5%, Our discharge remained largely unchanged from the prior year, decreasing only slightly by around 2%.

W5.1a

(W5.1a) For each facility referenced in W5.1, provide withdrawal data by water source.

Facility reference number

Facility 1

Facility name

Joslin, IL

Fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

0

Produced water

0

Third party sources

2924

Comment

Facility reference number

Facility 2

Facility name

Chicago, IL

Fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

0

Produced water

0

Third party sources

51

Comment

Facility reference number

Facility 3

Facility name

Madison, NE

Fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Brackish surface water/seawater

0

Groundwater - renewable

1625

Groundwater - non-renewable

0

Produced water

0

Third party sources

0

Comment

W5.1b

(W5.1b) For each facility referenced in W5.1, provide discharge data by destination.

Facility reference number

Facility 1

Facility name

Joslin, IL

Fresh surface water

3126

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

0

Comment

825.9 million gallons to Rock River

Facility reference number

Facility 2

Facility name

Chicago, IL

Fresh surface water

0

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

51

Comment

13.2 million gallons to city sewer

Facility reference number

Facility 3

Facility name

Madison, NE

Fresh surface water

0

Brackish surface water/Seawater

0

Groundwater

1313

Third party destinations

0

Comment

346.9 million gallons to irrigation

W5.1c

(W5.1c) For each facility referenced in W5.1, provide the proportion of your total water use that is recycled or reused, and give the comparison with the previous reporting year.

Facility reference number

Facility 1

Facility name

Joslin, IL

% recycled or reused

None

Comparison with previous reporting year

This is our first year of measurement

Please explain

We do not currently track water/recycled/reused at facility-level.

Facility reference number

Facility 2

Facility name

Chicago, IL

% recycled or reused

None

Comparison with previous reporting year

This is our first year of measurement

Please explain

We do not currently track water/recycled/reused at facility-level.

Facility reference number

Facility 3

Facility name

Madison, NE

% recycled or reused

100%

Comparison with previous reporting year

About the same

Please explain

At our Madison, NE facility we land apply wastewater. This recycling activity is done for beneficial recycling of nutrients and reuse of water.

W5.1d

(W5.1d) For the facilities referenced in W5.1, what proportion of water accounting data has been externally verified?

Water withdrawals – total volumes

% verified

Not verified

What standard and methodology was used?

Our water withdrawals from ground water wells and local municipal water companies are metered to provide accurate usage amounts; however, usages are not externally verified.

Water withdrawals – volume by source

% verified

Not verified

What standard and methodology was used?

Our water withdrawals from ground water wells and local municipal water companies are metered to provide accurate usage amounts; however, usages are not externally verified.

Water withdrawals – quality

% verified

Not verified

What standard and methodology was used?

We do not have information for this other than what is provided by public water suppliers regarding the quality of the finished water.

Water discharges – total volumes

% verified

51-75

What standard and methodology was used?

For our plants with direct discharges, our discharge permits require accurate flow measurement of effluent. This is done with a meter calibrated by a third party. In addition, the governing agency that issues the discharge permit physically visits the discharge site to confirm that an accurate measuring device is being used, and to review the flow data gathered by that device.

Water discharges – volume by destination

% verified

51-75

What standard and methodology was used?

For our plants with direct discharges, our discharge permits require accurate flow measurement of effluent. This is done with a meter calibrated by a third party. In addition, the governing agency that issues the discharge permit physically visits the discharge site to confirm that an accurate measuring device is being used, and to review the flow data gathered by that device.

Water discharges – volume by treatment method

% verified

51-75

What standard and methodology was used?

For our plants with direct discharges, our discharge permits require accurate flow measurement of effluent. This is done with a meter calibrated by a third party. In addition, the governing agency that issues the discharge permit physically visits the discharge site to confirm that an accurate measuring device is being used, and to review the flow data gathered by that device.

Water discharge quality – quality by standard effluent parameters

% verified

51-75

What standard and methodology was used?

For our plants with direct discharges, our discharge permits require accurate flow measurement of effluent. This is done with a meter calibrated by a third party. In addition, the governing agency that issues the discharge permit physically visits the discharge site to confirm that an accurate measuring device is being used, and to review the flow data gathered by that device.

Water discharge quality – temperature

% verified

Not verified

What standard and methodology was used?

We follow our discharge permit requirements, and are not required at this time to monitor our water discharge for temperature.

Water consumption – total volume

% verified

Not verified

What standard and methodology was used?

Our water withdrawals from ground water wells and local municipal water companies are metered to provide accurate usage amounts; however, usages are not externally verified.

Water recycled/reused

% verified

Not verified

What standard and methodology was used?

We do not currently track water/recycled/reused at facility-level.

W6. Governance

W6.1

(W6.1) Does your organization have a water policy?

No, but we plan to develop one within the next 2 years

W6.2

(W6.2) Is there board level oversight of water-related issues within your organization?

Yes

W6.2a

(W6.2a) Identify the position(s) of the individual(s) on the board with responsibility for water-related issues.

Position of individual	Please explain
Other, please specify (Governance and Nominating Committee..) Governance and Nominating Committee of the Board of Directors	Our approach to sustainability is multidimensional, and we maintain an integrated strategy that allows us to drive improvements in all areas of sustainability. This strategy is supported by our President and CEO, with oversight from our Board of Directors. Our Governance and Nominating Committee of our Board of Directors regularly interacts with our Executive Vice President of Corporate Strategy and Chief Sustainability Officer regarding water-related issues, who reports to our President and CEO and shares regular progress updates on water-related issues with the Board.

W6.2b

(W6.2b) Provide further details on the board's oversight of water-related issues.

	Frequency that water-related issues are a scheduled agenda item	Governance mechanisms into which water-related issues are integrated	Please explain
Row 1	Scheduled - some meetings	Reviewing and guiding business plans Reviewing and guiding major plans of action Reviewing and guiding strategy	Our approach to sustainability is multidimensional, and we maintain an integrated strategy that allows us to drive improvements in all areas of sustainability. This strategy is supported by our President and CEO, with oversight from our Board of Directors. Our Executive Vice President of Corporate Strategy and Chief Sustainability Officer, who reports to our President and CEO and regularly interacts with the company's Board of Directors, shares regular progress updates with the Governance and Nominating Committee of our Board of Directors.

W6.3

(W6.3) Below board level, provide the highest-level management position(s) or committee(s) with responsibility for water-related issues.

Name of the position(s) and/or committee(s)

Chief Sustainability Officer (CSO)

Responsibility

Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

More frequently than quarterly

Please explain

The Environmental Services and Sustainable Food Production teams prepare and submit monthly reports to the President and CEO that includes information on progress with environmental and other sustainability initiatives (e.g., progress on continuous water monitoring projects, etc.). Our President and CEO, who is a member of the board, then shares the report with the board. Additionally, in May 2017, we appointed our first Chief Sustainability Officer, who is a direct report to our President and CEO. Our Chief Sustainability Officer has oversight of the functions associated with our Environmental Services and Sustainable Food Production teams.

W-FB6.4/W-CH6.4/W-EU6.4/W-OG6.4/W-MM6.4

(W-FB6.4/W-CH6.4/W-EU6.4/W-OG6.4/W-MM6.4) Do you provide incentives to C-suite employees or board members for the management of water-related issues?

Yes

W-FB6.4a/W-CH6.4a/W-EU6.4a/W-OG6.4a/W-MM6.4a

(W-FB6.4a/W-CH6.4a/W-EU6.4a/W-OG6.4a/W-MM6.4a) What incentives are provided to C-suite employees or board members for the management of water-related issues?

	Who is entitled to benefit from these incentives?	Indicator for incentivized performance	Please explain
Monetary reward	Other, please specify (Environmental Services and...) <i>Environmental Services and Sustainable Food Strategy Teams</i>	Reduction of product water intensity	Our Chief Environmental Officer and our Sr Director of Sustainable Food Strategy, both of whom report to our Chief Sustainability Officer, are offered monetary incentives if the company achieves its 12% water reduction target by 2020. In addition, the teams reporting to these two senior leaders, are also offered monetary incentives if the company reaches its water reduction target.
Recognition (non-monetary)	No one is entitled to these incentives	<Not Applicable>	No one is entitled to 'Recognition (non-monetary)' incentives.
Other non-monetary reward	No one is entitled to these incentives	<Not Applicable>	No one is entitled to 'Other non-monetary reward' incentives.

W6.5

(W6.5) Do you engage in activities that could either directly or indirectly influence public policy on water through any of the following?

Yes, direct engagement with policy makers

W6.5a

(W6.5a) What processes do you have in place to ensure that all of your direct and indirect activities seeking to influence policy are consistent with your water policy/water commitments?

Water touches everything we do at Tyson Foods — from the irrigation needed to grow the grain that feeds poultry and livestock to our processing plants where we use water to process animals, cook prepared foods and clean our facilities. Water is a finite resource that must be used and managed responsibly from farm to finished product. Food safety and quality is our top priority and water is essential to producing safe food. We aim to balance responsible water stewardship with protecting the quality and safety of our products. For example, we have engaged and collaborated with both the US Department of Agriculture and the US Environmental Protection Agency to identify food processing solutions that protect food safety while conserving water.

W7. Business strategy

W7.1

(W7.1) Are water-related issues integrated into any aspects of your long-term strategic business plan, and if so how?

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	Yes, water-related issues are integrated	5-10	Water touches everything we do at Tyson Foods — from the irrigation needed to grow the grain that feeds poultry and livestock to our processing plants where we use water to process animals, cook prepared foods and clean our facilities. We also recognize natural disasters, fire, bioterrorism, pandemic or extreme weather, including droughts, floods, excessive cold or heat, hurricanes or other storms, could impair the health or growth of livestock or interfere with our operations due to power outages, fuel shortages, decrease in availability of water, or damage to our production and processing. We are currently collaborating with the World Resources Institute (WRI) to further refine this goal and establish context-based goals that mitigate our water quality and scarcity risks at the facility level. WRI is also in the process of conducting a Water Risk Assessment that will be completed in FY2018.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	5-10	We are currently collaborating with the World Resources Institute (WRI) to establish context-based goals that mitigate our water quality and scarcity risks at the facility level. WRI is also in the process of conducting a Water Risk Assessment that will be completed in FY2018.
Financial planning	Yes, water-related issues are integrated	5-10	Natural disasters, fire, bioterrorism, pandemic or extreme weather, including droughts, floods, excessive cold or heat, hurricanes or other storms, could impair the health or growth of livestock or interfere with our operations due to power outages, fuel shortages, decrease in availability of water, damage to our production and processing facilities or disruption of transportation channels or unfavorably impact the demand for, or our consumers' ability to purchase our products, among other things. Any of these factors could have an adverse effect on our financial results. We are currently collaborating with the World Resources Institute (WRI) to establish context-based goals that mitigate our water quality and scarcity risks at the facility level. WRI is also in the process of conducting a Water Risk Assessment that will be completed in FY2018.

W7.2

(W7.2) What is the trend in your organization’s water-related capital expenditure (CAPEX) and operating expenditure (OPEX) for the reporting year, and the anticipated trend for the next reporting year?

	Water-related CAPEX (+/- % change)	Anticipated forward trend for CAPEX (+/- % change)	Water-related OPEX (+/- % change)	Anticipated forward trend for OPEX (+/- % change)	Please explain
Row 1	146	546	79	3	Large water projects expected in FY18 and FY19 to achieve our intensity goals, most \$ spend is CAPEX.

W7.3

(W7.3) Does your organization use climate-related scenario analysis to inform its business strategy?

	Use of climate-related scenario analysis	Comment
Row 1	Yes	We recognize the importance of climate change and have deployed initiatives to reduce emissions throughout our company. FY17 was a pivotal year for Tyson Foods as sustainability became integral and defined as part of our publicly disclosed strategy. Additionally, we collaborated with World Resources Institute to set and announce a 30% reduction by 2030 greenhouse gas reduction target for our scope 1, 2, and 3 emissions. We also committed to support improved environmental practices on 2 million acres of corn production by the end of 2020. This is the largest-ever land stewardship commitment by a U.S. protein company and is expected to lower the greenhouse gas emissions generated by our supply chain.

W7.3a

(W7.3a) Has your organization identified any water-related outcomes from your climate-related scenario analysis?

Yes

W7.3b

(W7.3b) What water-related outcomes were identified from the use of climate-related scenario analysis, and what was your organization's response?

	Climate-related scenario(s)	Description of possible water-related outcomes	Company response to possible water-related outcomes
Row 1	2DS	Water touches everything we do at Tyson Foods — from the irrigation needed to grow the grain that feeds poultry and livestock to our processing plants where we use water to process animals, cook prepared foods and clean our facilities. We also recognize natural disasters, fire, bioterrorism, pandemic or extreme weather, including droughts, floods, excessive cold or heat, hurricanes or other storms, could impair the health or growth of livestock or interfere with our operations due to power outages, fuel shortages, decrease in availability of water, or damage to our production and processing.	We are currently collaborating with the World Resources Institute (WRI) to establish context-based goals that mitigate our water quality and scarcity risks at the facility level. WRI is also in the process of conducting a Water Risk Assessment.

W7.4

(W7.4) Does your company use an internal price on water?

Row 1

Does your company use an internal price on water?

No, but we are currently exploring water valuation practices

Please explain

We recognize that the base price paid for water does not necessarily reflect its true value when risk is factored in. Several publicly available models have been reviewed but we have not found any that we feel provide an estimation method that reflects what we consider to be a reasonable reflection of risks and true cost. We intend to continue to pursue this area.

W8. Targets

W8.1

(W8.1) Describe your approach to setting and monitoring water-related targets and/or goals.

	Levels for targets and/or goals	Monitoring at corporate level	Approach to setting and monitoring targets and/or goals
Row 1	Company-wide targets and goals Business level specific targets and/or goals Activity level specific targets and/or goals Site/facility specific targets and/or goals	Targets are monitored at the corporate level Goals are monitored at the corporate level	To ensure we were creating an achievable, cost-effective target, we worked with a water treatment and process improvements supply partner to conduct multiple plant assessments and review historical water use data. We utilize a bottom-up approach; every site has their own specific goal. These plant-level goals are not all the same; they depend on what is reasonably achievable for the site. The plant-level goals are aggregated to the activity level (i.e. Beef Production). Those goals are further aggregated to the business level (i.e. Fresh Meats). Finally, all business-level goals are aggregated into corporate-level goals. Additionally, we are currently collaborating with the World Resources Institute (WRI) to further refine and establish context-based goals that mitigate our water quality and scarcity risks at the facility level and in our supply chains.

W8.1a

(W8.1a) Provide details of your water targets that are monitored at the corporate level, and the progress made.

Target reference number

Target 1

Category of target

Product water intensity

Level

Company-wide

Primary motivation

Water stewardship

Description of target

Water is a key component of food production since it's essential to keeping food safe for consumers. We understand the important balance between protecting product quality and conserving water, a natural resource. In FY16, we announced a public commitment to reducing water use in our direct operations by 12 percent by the end of 2020, using 2015 as the baseline year. In FY17, we did experience a 550 million gallon increase in water withdrawal as compared to FY16 however our intensity per pound of finished product did not increase for that same timeframe.

Quantitative metric

% reduction per unit of production

Baseline year

2015

Start year

2016

Target year

2020

% achieved

0

Please explain

Our most impactful projects in our pipeline are at the ground floor and will be implemented in FY18 and FY19. Progress is already being realized in FY18. We anticipate achieving our target by 2020.

W8.1b

(W8.1b) Provide details of your water goal(s) that are monitored at the corporate level and the progress made.

Goal

Promotion of sustainable agriculture practices

Level

Site/facility

Motivation

Shared value

Description of goal

Three of our beef plants are committed to reusing wastewater for crop irrigation. At our Pasco, Washington; Holcomb, Kansas; and Madison, Nebraska Fresh Meats plants, we reused more than two billion gallons of wastewater for crop irrigation. This not only conserves water, but allows the nutrients in the wastewater to be used to grow crops and reduce the need to purchase manufactured commercial fertilizer. More than three million pounds of nutrients were collected and redistributed by beneficial soil irrigation practices through this process in Fiscal 2017.

Baseline year

2016

Start year

2016

End year

2017

Progress

Complete

Goal

Watershed remediation and habitat restoration, ecosystem preservation

Level

Other, please specify (Regional)

Motivation

Water stewardship

Description of goal

We continue our conservation efforts with the Nature Conservancy's Arkansas Chapter. We have granted and provided volunteer support to help the chapter complete a significant stream bank restoration in the Oxbow section of the Kings River, monitor sediment reduction, and survey a tributary and plan its restoration. The support also includes projects on the Elk River and enrolling conservation easements in Arkansas' Buffalo National River watershed. We will also be engaging with the Nature Conservancy and the broader allied industry to encourage corn farmers to adopt practices that optimize soil health, and that reduce fertilizer use and soil loss.

Baseline year

2016

Start year

2016

End year

2017

Progress

Ongoing

Goal

Engaging with local community

Level

Company-wide

Motivation

Water stewardship

Description of goal

Our processing plants work with and support the water stewardship efforts of their local communities. For example, as part of Earth Day 2017, our Monett, Missouri, complex planted more than 600 trees and bushes near the Capps Creek Conservation Area. Team Members volunteered to take part in the stream bank stabilization and riparian corridor enhancement project along Capps Creek to help the environment from disasters that could damage the environment, including floods and severe storms.

Baseline year

2016

Start year

2016

End year

2017

Progress

Ongoing

W9. Linkages and trade-offs

W9.1

(W9.1) Has your organization identified any linkages or tradeoffs between water and other environmental issues in its direct operations and/or other parts of its value chain?

Yes

W9.1a

(W9.1a) Describe the linkages or tradeoffs and the related management policy or action.

Linkage or tradeoff

Linkage

Type of linkage/tradeoff

Decreased wastewater treatment

Description of linkage/tradeoff

Land application of wastewater effluent decreases the amount of additional wastewater treatment necessary to meet drinking water standards, and in turn also decreases the amount of freshwater necessary to irrigate crops.

Policy or action

Our Holcomb, Kansas facility generates a biological process wastewater stream from the processing facility that is directed to a wastewater treatment plant (WWTP). The effluent wastewater stream from the WWTP is subsequently directed to two (2) irrigation water storage ponds. Effluent from the storage ponds and freshwater from irrigation wells are used to irrigate approximately 7,850 acres of land. We have two additional facilities that land apply wastewater effluent.

W10. Verification

W10.1

(W10.1) Do you verify any other water information reported in your CDP disclosure (not already covered by W5.1d)?

No, we do not currently verify any other water information reported in our CDP disclosure

W11. Sign off

W-FI

(W-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

W11.1

(W11.1) Provide details for the person that has signed off (approved) your CDP water response.

	Job title	Corresponding job category
Row 1	Chief Sustainability Officer	Chief Sustainability Officer (CSO)

W11.2

(W11.2) Please indicate whether your organization agrees for CDP to transfer your publicly disclosed data on your impact and risk response strategies to the CEO Water Mandate's Water Action Hub [applies only to W2.1a (response to impacts), W4.2 and W4.2a (response to risks)].

No

SW. Supply chain module

SW0.1

(SW0.1) What is your organization's annual revenue for the reporting period?

	Annual revenue
Row 1	38300000000

SW0.2

(SW0.2) Do you have an ISIN for your organization that you are willing to share with CDP?

Yes

SW0.2a

(SW0.2a) Please share your ISIN in the table below.

	ISIN country code	ISIN numeric identifier (including single check digit)
Row 1	US	9024941034

SW1.1

(SW1.1) Have you identified if any of your facilities reported in W5.1 could have an impact on a requesting CDP supply chain member?

This is confidential

SW1.2

(SW1.2) Are you able to provide geolocation data for your site facilities not already reported in W5.1?

No, this is confidential data

SW2.1

(SW2.1) Please propose any mutually beneficial water-related projects you could collaborate on with specific CDP supply chain members.

SW2.2

(SW2.2) Have any water projects been implemented due to CDP supply chain member engagement?

No

SW3.1

(SW3.1) Provide any available water intensity values for your organization's products or services across its operations.

Product name

Chicken Products

Water intensity value

1.27

Numerator: Water aspect

Other, please specify (Freshwater withdrawn)

Denominator: Unit of production

Pounds

Comment

Intensity is calculated by taking the total freshwater withdrawn divided by pounds of product produced. This is our first year of measuring water intensity information.

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	Public or Non-Public Submission	I am submitting to	Are you ready to submit the additional Supply Chain Questions?
I am submitting my response	Public	Investors Customers	Yes, submit Supply Chain Questions now

Please confirm below

I have read and accept the applicable Terms