



Suncor Energy Inc. CDP Water Security Questionnaire 2019

W0. Introduction

W0.1

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

Suncor is an integrated energy company headquartered in Calgary, Alberta, Canada. The company is strategically focused on developing one of the world’s largest petroleum resource basins – Canada’s Athabasca oil sands. In addition, Suncor explores for, acquires, develops, produces and markets crude oil in Canada and internationally; the company transports and refines crude oil, and markets petroleum and petrochemical products primarily in Canada. The company also conducts energy trading activities focused principally on the marketing and trading of crude oil, natural gas, power and byproducts. Suncor also operates a renewable energy business as part of its overall portfolio of assets.

W-OG0.1a

(W-OG0.1a) Which business divisions in the oil & gas sector apply to your organization?

- Upstream
- Downstream

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	January 1, 2018	December 31, 2018



W0.3

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

- Canada
- United States of America

W0.4

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

- CAD

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?

- No

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	Indirect use importance	Please explain
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	rating	rating	
Sufficient amounts of good quality freshwater available for use	Vital	Important	<p>Water is an integral component of Suncor's operations to extract, upgrade and refine our oil & gas products. Our operations use fresh water, saline water, recycled wastewater and industrial storm water run-off for water make-up. The primary use of fresh water in Suncor operations is for utilities.</p> <p>Suncor has developed models and tools used to anticipate future trends in areas such as energy efficiency, water consumption, air emissions and land disturbance. To advance Suncor's goal to continue improving environmental performance, Suncor uses a Sustainability Planning Forecast that estimates performance metrics over a 10 year outlook on a corporate and facility level.</p> <p>We are also focused on extending our commitment to water stewardship by working to develop a new long-term water goal. Our plan is to take a watershed approach to this goal and work with stakeholders and Indigenous communities to determine where we can have the greatest impact. This is an innovative approach to goal setting and we are excited to see the results of the process.</p>
Sufficient amounts of recycled, brackish and/or produced water available for use	Vital	Important	<p>In 2018, about 88% of the water used by our Extraction operations was recycled tailings water at our oil sands Base plant operations</p> <p>Produced water in thermal in situ oil sands facilities primarily consists of condensed steam injected for oil recovery. The hot oil/water emulsion is treated to separate the oil for sales and to reuse the water for steam. Reuse rates at Suncor in situ facilities are approximately 98%.</p> <p>Our Edmonton refinery's primary water supply is reused municipal waste water from the local treatment facility. We anticipate that continued monitoring of the watersheds will help us adapt and continue to take appropriate actions to reduce our water footprint.</p> <p>Suncor has developed models and tools used to anticipate future trends in areas such as energy efficiency, water consumption, air emissions and land disturbance. To advance</p>

			Suncor’s goal to continue improving environmental performance, Suncor uses a Sustainability Planning Forecast that estimates performance metrics over a 10 year outlook on a corporate and facility level.
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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	100%	Total water withdrawal volumes are measured and monitored at our operating facilities as a regulatory requirement. We also publicly disclose water performance including annual withdrawal volumes in our Report on Sustainability. This helps us to track and report our withdrawal volumes for better performance and also to increase transparency with our stakeholders. Suncor complies with provincial and federal regulatory standards for water monitoring which typically requires monthly and/or annual reporting to regulatory agencies. The standards mandate specific technical methods and monitoring boundaries consistent with best practices.
Water withdrawals – volumes from water stressed areas	Not relevant	Per the severe water stress index in the World Wildlife Fund (WWF) Water Risk Filter tool, Suncor does not currently operate in water stressed areas. The Water Risk Filter tool uses a risk assessment based on physical risk (i.e. scarcity, pollution, impact on ecosystem and supplier’s water risks), regulatory risk and reputational risk. The Commerce City Refinery was evaluated as a level 3 out of 5 on the severe water stress index, which indicates a future potential risk for water stress in the Mississippi River Basin.
Water withdrawals – volumes by source	100%	Total water withdrawal volumes by source are metered at all of our operating facilities. As a regulatory requirement, we report the volumes we withdraw from each source. We also publicly disclose water performance including annual withdrawal volumes in our Report on Sustainability. This aids with performance tracking and increases transparency with our

		<p>stakeholders.</p> <p>Suncor complies with provincial and federal regulatory standards for water monitoring which typically requires monthly and/or annual reporting to regulatory agencies. The standards mandate specific technical methods and monitoring boundaries consistent with best practices.</p>
Produced water associated with your oil & gas sector activities - total volumes [only oil and gas sector]	100%	<p>Produced water in thermal in situ oil sands facilities primarily consists of condensed steam injected for oil recovery. The hot oil/water emulsion is treated to separate the oil for sales and to reuse the water for steam. Reuse rates at Suncor in situ facilities are approximately 98%.</p> <p>Total produced water volumes are measured and monitored at Suncor In-Situ facilities. As a regulatory requirement, we report the volumes we withdraw to regulatory agencies. Suncor complies with provincial and federal regulatory standards for water monitoring which typically requires monthly and/or annual reporting to regulatory agencies. The standards mandate specific technical methods and monitoring boundaries consistent with best practices.</p>
Water withdrawals quality	51-75	<p>Suncor measures and monitors our surface water withdrawal quality. The monitored quality is aligned with water discharge quality effluent parameters.</p> <p>Suncor complies with provincial and federal regulatory standards for water monitoring which typically requires monthly and/or annual reporting to regulatory agencies. The standards mandate specific technical methods and monitoring boundaries consistent with best practices.</p>
Water discharges – total volumes	100%	<p>The total water discharge volumes are measured and monitored. We are required to report to the regulators the volume of water we discharge (return) back to the environment. Suncor also reports this volume annually to our stakeholders in our Report on Sustainability.</p> <p>Suncor complies with provincial and federal regulatory standards for water monitoring which typically requires monthly and/or annual reporting to regulatory agencies. The standards mandate specific technical methods and monitoring boundaries consistent with</p>

		best practices.
Water discharges – volumes by destination	100%	<p>The total water discharge volumes by destination are measured and monitored. We are required to report to the regulators the volume of water we discharge (return) back to the environment and where we discharge the water.</p> <p>Suncor complies with provincial and federal regulatory standards for water monitoring which typically requires monthly and/or annual reporting to regulatory agencies. The standards mandate specific technical methods and monitoring boundaries consistent with best practices.</p>
Water discharges – volumes by treatment method	100%	<p>The water discharge volumes by treatment method are both measured and monitored. We are required to report this information to the regulators.</p> <p>Suncor complies with provincial and federal regulatory standards for water monitoring which typically requires monthly and/or annual reporting to regulatory agencies. The standards mandate specific technical methods and monitoring boundaries consistent with best practices.</p>
Water discharge quality – by standard effluent parameters	100%	<p>Suncor measures and monitors our water discharge quality effluent parameters. We are regulated in our operating approvals on the quality of water we discharge back to the environment. This requires that we analyze for specific parameters and report these results to the regulators on a monthly and/or annual basis. We also report effluent water quality annually to our stakeholders in Suncor’s Report on Sustainability for our Oil Sands Mining and Downstream Refining and Supply operations.</p>
Water discharge quality – temperature	1-25	<p>Suncor measures and monitors our water discharge quality effluent parameters required by regulators and those parameters do not include the water temperature.</p> <p>As per agreements with regional utility corporations, we monitor and report the discharge temperature of the water sent to wastewater treatment plants from the Edmonton Refinery, oil sands Base plant, and Fort Hills.</p>
Water consumption – total volume	100%	<p>Suncor measures and monitors our water consumption volumes for all of our facilities. We report these volumes annually to our stakeholders in our Report on Sustainability.</p> <p>Suncor complies with provincial and federal regulatory standards for water monitoring</p>



		which typically requires monthly and/or annual reporting to regulatory agencies. The standards mandate specific technical methods and monitoring boundaries consistent with best practices.
Water recycled/reused	100%	Suncor measures and monitors our water consumption volumes for all of our facilities. Suncor complies with provincial and federal regulatory standards for water monitoring which typically requires monthly and/or annual reporting to regulatory agencies. The standards mandate specific technical methods and monitoring boundaries consistent with best practices.
The provision of fully-functioning, safely managed WASH services to all workers	100%	Suncor's operations are in developed countries which all have requirements for worker health and safety as well as water and sanitation provision. Monitoring is required at both the global/national level and at the facility level as per national policies and standards for WASH. The standards cover: water quality, water quantity, water facilities and access to water, wastewater treatment and disposal and other environmental issues.

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	144,688	Much higher	<p>In 2018, Suncor's total water withdrawal volume was approximately 38% higher than 2017.</p> <ul style="list-style-type: none"> • The increase was primarily due to the commissioning of the Fort Hills facility. Fort Hills started operations in January 2018 and the production ramped up to full capacity by the end of 2018. • There was an increase in water withdrawal at Base plant and two downstream refineries due to major turnarounds, which led to higher water consumption for maintenance work and less efficiency in extraction operations. • There was an increase in water withdrawal due to higher production at upstream in situ facilities

			<p>and off shore operations.</p> <p>Suncor has developed models and tools used to anticipate future trends in areas such as energy efficiency, water consumption, air emissions and land disturbance. To advance Suncor’s goal to continue improving environmental performance, Suncor uses a Sustainability Planning Forecast that estimates performance metrics over a 10 year outlook on a corporate and facility level.</p> <p>The reported figures satisfy the equation: $W = D + C$ Where, W= total withdrawals D= total discharges C= total consumption</p> <p>Total withdrawal does not include produced/processed water in this case. Produced water in thermal in situ oil sands facilities primarily consists of condensed steam injected for oil recovery. The hot oil/water emulsion is treated to separate the oil for sales and to reuse the water for steam. Reuse rates at Suncor in situ facilities are approximately 98%.</p>
<p>Total discharges</p>	<p>77,437</p>	<p>Higher</p>	<p>In 2018, Suncor’s total water discharge volume was 17% higher than 2017. This increase is due to:</p> <ul style="list-style-type: none"> • The commissioning of the Fort Hills facility. Fort Hills started operations in January 2018 and the production ramped up to full capacity by the end of 2018. • Higher runoff volumes collected and discharged in the Fort McMurray area. • There was an increase in water discharge due to higher production at off shore operations. • There was an increase in water discharge for all downstream operations, due to a more complete and comprehensive data set. <p>As per CDP guidance, total water discharges include fresh surface water and seawater Suncor has developed models and tools used to anticipate future trends in areas such as energy</p>

			<p>efficiency, water consumption, air emissions and land disturbance. To advance Suncor’s goal to continue improving environmental performance, Suncor uses a Sustainability Planning Forecast that estimates performance metrics over a 10 year outlook on a corporate and facility level.</p> <p>The reported figures satisfy the equation: $W = D + C$ Where, W= total withdrawals D= total discharges C= total consumption</p>
Total consumption	67,251	Much higher	<p>In 2018, Suncor’s total water consumption volume was approximately 70% higher than 2017.</p> <ul style="list-style-type: none"> • The increase was primarily due to the commissioning of the Fort Hills facility. Fort Hills started operations in January 2018 and the production ramped up to full capacity by the end of 2018. Therefore an extra amount of water was required for extraction use. • The increase can also be attributed to the combined effect of higher production and maintenance work at various sites compared to 2017. <p>Suncor has developed models and tools used to anticipate future trends in areas such as energy efficiency, water consumption, air emissions and land disturbance. To advance Suncor’s goal to continue improving environmental performance, Suncor uses a Sustainability Planning Forecast that estimates performance metrics over a 10 year outlook on a corporate and facility level.</p> <p>The reported figures satisfy the equation: $W = D + C$ Where, W= total withdrawals D= total discharges C= total consumption</p>

W-OG1.2c

(W-OG1.2c) In your oil & gas sector operations, what are the total volumes of water withdrawn, discharged, and consumed – by business division – and what are the trends compared to the previous reporting year?

	Volume (megaliters /year)	Comparison with previous reporting year %	Please explain
Total withdrawals - upstream	94,728	Much higher	In 2018, Suncor's upstream total water withdrawal volume was 64% higher than 2017. The increase was due to: <ul style="list-style-type: none"> • The commissioning of our Fort Hills facility. The site started operations in January 2018 and the production ramped up to full capacity by the end of 2018. • Higher runoff volumes collected and discharged in the Fort McMurray area. Increased production at upstream in situ facilities and off shore operations.
Total discharges – upstream	32,728	Much higher	In 2018, Suncor's upstream total water discharge volume was 35% higher than 2017. <ul style="list-style-type: none"> • This increase is mainly due to higher runoff volumes collected and discharged in the Fort McMurray area. • In addition, the increase can be attributed to the commissioning of the Fort Hills facility. Fort Hills started operations in January 2018 and the production ramped up to full capacity by the end of 2018. • Terra Nova off shore operations increased production rates which cause higher water discharge volumes compared to 2017 operations.
Total consumption – upstream	62,000	Much higher	In 2018, Suncor's upstream total water consumption volume was 87% higher than 2017. <ul style="list-style-type: none"> • The increase was mainly due to the commissioning of our Fort Hills facility. The site started operations in January 2018 and the production ramped up to full capacity by the end of 2018. • In addition, there were increased production rates at in situ facilities and Terra Nova off shore operations which caused an increase in water consumption.

Total withdrawals - downstream	49,960	About the same	In 2018, Suncor downstream total water withdrawal volume was about the same as 2017 performance. During 2018, there was a combined impact from maintenance work, increase requirement of water for operational use and increased runoff volumes.
Total discharges – downstream	44,709	About the same	In 2018, Suncor’s downstream total water discharge volume was about the same as 2017 performance. There were slightly higher runoff volumes collected and discharged in the Ontario area throughout 2018.
Total consumption – downstream	5,251	Lower	In 2018, Suncor’s downstream total water consumption volumes were 13% lower compared to 2017 performance. This was mainly due major maintenance events and higher runoff volumes collected and discharged in the Ontario area throughout 2018.

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	Relevant	107,398	Much higher	In 2018, Suncor’s fresh water withdrawal volume was 44% higher than 2017. <ul style="list-style-type: none"> • This was mainly due to the commissioning of the Fort Hills facility. Fort Hills started operations in January 2018 and the production ramped up to full capacity by the end of 2018. • In addition, there was increased rainwater volumes collected in the Fort McMurray area compared to 2017. Suncor has developed models and tools used to anticipate future trends in areas such as water consumption. To advance Suncor’s goal to

				continue improving environmental performance, Suncor uses a Sustainability Planning Forecast that estimates performance metrics over a 10 year outlook on a corporate and facility level.
Brackish surface water/Seawater	Relevant	28,523	Much higher	<p>There was a 28% increase in seawater withdrawal used for injection at the Terra Nova off shore site, due to higher production in 2018. Suncor has developed models and tools used to anticipate future trends in areas such as energy efficiency, water consumption, air emissions and land disturbance.</p> <p>To advance Suncor’s goal to continue improving environmental performance, Suncor uses a Sustainability Planning Forecast that estimates performance metrics over a 10 year outlook on a corporate and facility level.</p>
Groundwater – renewable	Not relevant			<p>Suncor does not use renewable groundwater in operations. Suncor has developed models and tools used to anticipate future trends in areas such as energy efficiency, water consumption, air emissions and land disturbance. To advance Suncor’s goal to continue improving environmental performance, Suncor uses a Sustainability Planning Forecast that estimates performance metrics over a 10 year outlook on a corporate and facility level.</p>
Groundwater – non-renewable	Relevant	3,133	Much higher	<p>In 2018, Suncor’s ground water withdrawal volume was 38% higher than 2017. This was due to:</p> <ul style="list-style-type: none"> • The commissioning of the Fort Hills facility. Fort Hills started operations in January 2018 and the production ramped up to full capacity by the end of 2018. • Commerce City refinery increased groundwater withdrawal for a maintenance event and other operational use. • Increased production at in situ sites (Firebag and MacKay River) <p>Suncor has developed models and tools used to anticipate future trends</p>

				<p>in areas such as energy efficiency, water consumption, air emissions and land disturbance. To advance Suncor’s goal to continue improving environmental performance, Suncor uses a Sustainability Planning Forecast that estimates performance metrics over a 10 year outlook on a corporate and facility level.</p>
Produced/Entrained water	Not relevant			<p>Produced water in thermal in situ oil sands facilities primarily consists of condensed steam injected for oil recovery. The hot oil/water emulsion is treated to separate the oil for sales and to reuse the water for steam. As a result of high recycle rates (>98%), the produced water volume of 42 million m3 is not a new withdrawal from a surface or groundwater source.</p> <p>In 2018, Suncor upstream in situ sites (Firebag and MacKay River) and Terra Nova offshore operations production increased compared to 2017 performance.</p> <p>In 2018, produced water recycling rate was 95.9% at our Firebag in-situ operations and 99.6% at our MacKay River in-situ operations. Suncor has developed models and tools used to anticipate future trends in areas such as energy efficiency, water consumption, air emissions and land disturbance. To advance Suncor’s goal to continue improving environmental performance, Suncor uses a Sustainability Planning Forecast that estimates performance metrics over a 10 year outlook.</p>
Third party sources	Relevant	5,634	About the same	<p>In 2018, Suncor’s water withdrawal volume from third party sources was about the same as 2017 performance. There was a small decrease, about 4%, in water withdrawal from third party sources which is mainly due to higher water withdrawal from other fresh water sources such as the river and rainwater, therefore there was less of a requirement to import water from third parties.</p>

				<p>Suncor has developed models and tools used to anticipate future trends in areas such as energy efficiency, water consumption, air emissions and land disturbance. To advance Suncor’s goal to continue improving environmental performance, Suncor uses a Sustainability Planning Forecast that estimates performance metrics over a 10 year outlook on a corporate and facility level.</p>
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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	53,664	About the same	<p>In 2018, Suncor water discharge volumes to fresh surface water were about the same as 2017 performance. There was a small increase of about 7% which can be attributed to:</p> <ul style="list-style-type: none"> • The commissioning of the Fort Hills facility had a minimum impact (less than 1%). • The increase is mainly due to higher runoff volumes collected and discharged in the Fort McMurray area. <p>Suncor has developed models and tools used to anticipate future trends in areas such as energy efficiency, water consumption, air emissions and land disturbance. To advance Suncor’s goal to continue improving environmental performance, Suncor uses a Sustainability Planning Forecast that estimates performance metrics over a 10 year outlook on a corporate and facility level.</p>
Brackish surface	Relevant	21,337	Much higher	In 2018, brackish seawater discharge increased by 35% due to higher production

water/seawater				<p>rates in Terra Nova offshore facility.</p> <p>Suncor has developed models and tools used to anticipate future trends in areas such as energy efficiency, water consumption, air emissions and land disturbance. To advance Suncor’s goal to continue improving environmental performance, Suncor uses a Sustainability Planning Forecast that estimates performance metrics over a 10 year outlook on a corporate and facility level.</p>
Groundwater	Not relevant			<p>Suncor does not discharge groundwater in operations.</p> <p>Suncor has developed models and tools used to anticipate future trends in areas such as energy efficiency, water consumption, air emissions and land disturbance. To advance Suncor’s goal to continue improving environmental performance, Suncor uses a Sustainability Planning Forecast that estimates performance metrics over a 10 year outlook on a corporate and facility level.</p>
Third-party destinations	Relevant	2,437	About the same	<p>In 2018, we have improved our data set and have been able to capture the amount of water we send to municipal treatment plants from various upstream and downstream facilities.</p> <p>Suncor has developed models and tools used to anticipate future trends in areas such as energy efficiency, water consumption, air emissions and land disturbance. To advance Suncor’s goal to continue improving environmental performance, Suncor uses a Sustainability Planning Forecast that estimates performance metrics over a 10 year outlook on a corporate and facility level.</p>

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
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Row 1	26-50	About the same	In 2018, Suncor's annual water recycled/ reused volume was 134.99 million m3. This volume includes recycled tailings and other stored water volumes.
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W-OG1.2j

(W-OG1.2j) What proportion of your total water use do you recycle or reuse in your operations associated with the oil & gas sector?

	% recycled and reused	Comparison with previous reporting year	Please explain
Upstream	76-99	About the same	<p>In 2018, the Extraction Recycle Rate at oil sands Base plant was approximately 88%. The upgrader on site had a major turnaround, which impacted extraction operations and caused lower production rates and extraction plants operated with lower water efficiency.</p> <p>In 2018, the Extraction Recycle Rate at oil sands Fort Hills was approximately 75%. The site started operations in January 2018 and the production ramped up to full capacity by the end of 2018.</p> <p>Suncor has developed models and tools used to anticipate future trends in areas such as energy efficiency, water consumption, air emissions and land disturbance. To advance Suncor's goal to continue improving environmental performance, Suncor uses a Sustainability Planning Forecast that estimates performance metrics over a 10 year outlook on a corporate and facility level.</p>
Downstream	1-25	About the same	<p>In 2018, operations remained consistent with 2017 performance.</p> <p>Suncor has developed models and tools used to anticipate future trends in areas such as energy efficiency, water consumption, air emissions and land disturbance. To advance Suncor's goal to continue improving environmental performance, Suncor uses a Sustainability Planning Forecast that estimates performance metrics over a 10 year outlook on a corporate and facility level.</p>

W-OG1.3

(W-OG1.3) Do you calculate water intensity for your activities associated with the oil & gas sector?

Yes

W-OG1.3a

(W-OG1.3a) Provide water intensity information associated with your activities in the oil & gas sector.

Business division

Upstream

Water intensity value (m3)

0.44

Numerator: water aspect

Total withdrawals

Denominator: unit of production

Barrel of oil equivalent

Comparison with previous reporting year

Much higher

Please explain

In 2018, Suncor upstream total water withdrawal intensity is 30% higher than 2017.

- The increase was primarily due to the commissioning of the Fort Hills facility. Fort Hills started operations in January 2018 and the production ramped up to full capacity by the end of 2018.
- There was an increase in water withdrawal at Base plant due to a major turnaround, which led to higher water consumption for maintenance work and less efficiency in extraction operations.

This metric is used to monitor our water use and success of process optimization strategies (ie. recycling, reuse, return strategies).

Business division

Upstream

Water intensity value (m3)

0.29

Numerator: water aspect

Total water consumption

Denominator: unit of production

Barrel of oil equivalent

Comparison with previous reporting year

Much higher

Please explain

In 2018, Suncor upstream total water consumption intensity is 47% higher than 2017.

- The increase was primarily due to the commissioning of the Fort Hills facility. Fort Hills started operations in January 2018 and the production ramped up to full capacity by the end of 2018.
- There was an increase in water withdrawal at Base plant due to a major turnaround, which led to higher water consumption for maintenance work and less efficiency in extraction operations.

This metric is used to monitor our water use and success of process optimization strategies (ie. recycling, reuse, return strategies).

Business division

Downstream

Water intensity value (m3)

0.29

Numerator: water aspect

Total withdrawals

Denominator: unit of production

Barrel of oil equivalent

Comparison with previous reporting year

About the same

Please explain

In 2018, Suncor's downstream total water withdrawal intensity was about the same as 2017 performance. This is due to the combined impact from maintenance work and increase production at refineries.

This metric is used to monitor our water use and success of process optimization strategies (ie. recycling, reuse, return strategies).

Business division

Downstream

Water intensity value (m3)

0.03

Numerator: water aspect

Total water consumption

Denominator: unit of production

Barrel of oil equivalent



Comparison with previous reporting year

About the same

Please explain

In 2018, Suncor's downstream total water consumption intensity was about the same as 2017 performance. This is due to the combined impact from maintenance work and increased production at refineries.

This metric is used to monitor our water use and success of process optimization strategies (ie. recycling, reuse, return strategies).

W1.4

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

Yes, our suppliers

W1.4a

(W1.4a) What proportion of suppliers do you request to report on their water use, risks and/or management information and what proportion of your procurement spend does this represent?

Row 1

% of suppliers by number

26-50%

% of total procurement spend

Rationale for this coverage

Suncor's supplier risk identification process begins with a pre-screen process through our prequalification tool, Avetta. This process ensures current and potential contractors meet Suncor's minimum requirements in EH&S and regulatory, legal, quality and finance.

In 2019 SCM implemented a series of Sustainability questions that must be answered by all suppliers when prequalifying with Suncor. The Sustainability questions are focused on Indigenous relations/participation, climate change, human rights, inclusion and diversity, community investment and social innovation and sustainability embedding. As of April 30, 2019, 1,714 suppliers and 1,954 potential suppliers had provided responses to the sustainability prequalification questions through Avetta. The 1,714 active suppliers that responded represent 49% of our 2018 supply chain spend and 26% of our suppliers.

Impact of the engagement and measures of success

In addition we are piloting sustainability criteria to our supplier performance management meetings and strategic supplier meetings. We held 10 strategic supplier meetings where the agenda included Sustainability topics and encouraged suppliers the opportunity to share how sustainability is being made a priority in their organization. As we mature our processes and systems we will embed sustainability in all of our annual and quarterly supplier performance management meetings.

Comment

In 2018 Supply Chain Management (SCM) Sustainability formalized a SCM Sustainability Strategy. It was developed based on our materiality assessment. The process accounted internal and external inputs/material issues. This identified 6 priority areas for us and the systematic approach to gathering information based on risk at all step of our supply chain. The areas of focus are designed to progress sustainability strategy and align with our Corporate goals including Suncor's Social and GHG Goal.

W1.4b

(W1.4b) Provide details of any other water-related supplier engagement activity.

Type of engagement

Other

Details of engagement

Other, please specify

Water management and stewardship is integrated into supplier evaluation processes, and Educate suppliers about water stewardship and collaboration

% of suppliers by number

26-50

% of total procurement spend

26-50

Rationale for the coverage of your engagement

Suncor's supplier risk identification process begins with a pre-screen process through our prequalification tool, Avetta. This process ensures current and potential contractors meet Suncor's minimum requirements in EH&S and regulatory, legal, quality and finance.

In 2019 SCM implemented a series of Sustainability questions that must be answered by all suppliers when prequalifying with Suncor. The Sustainability questions are focused on Indigenous relations/participation, climate change, human rights, inclusion and diversity, community investment and social innovation and sustainability embedding. As of April 30, 2019, 1,714 suppliers and 1,954 potential suppliers had provided responses to the sustainability prequalification questions through Avetta. The 1,714 active suppliers that responded represent 49% of our 2018 supply chain spend and 26% of our suppliers.

Impact of the engagement and measures of success

In addition we are piloting sustainability criteria to our supplier performance management meetings and strategic supplier meetings. We held 10 strategic supplier meetings where the agenda included Sustainability topics and encouraged suppliers the opportunity to share how sustainability is being made a priority in their organization. As we mature our processes and systems we will embed sustainability in all of our annual and quarterly supplier performance management meetings.

W2. Business impacts

W2.1

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

No

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?

No

W3. Procedures

W-OG3.1

(W-OG3.1) How does your organization identify and classify potential water pollutants associated with its activities in the oil & gas sector that may have a detrimental impact on water ecosystems or human health?

Potential pollutants of concern are identified and monitored as per our approval conditions (i.e. Alberta's Environmental Protection and Enforcement Act or the US Environmental Protection Agency). Suncor also identifies and classifies potential water pollutants through Environmental Impact Assessments (EIAs) that are completed for projects, along with regional monitoring and reporting requirements.

During an EIA, all potentially detrimental pollutants are identified and managed throughout the life of the project. Additionally, Suncor follows the Canadian Council of Ministers of the Environment (CCME) Environmental Quality Guidelines for all upstream authorizations.

The method used to identify potential water pollutants is based on established reporting and monitoring standards, along with published research on baseline and/or natural levels of pollutants in the regions where we operate.

Potentially Impacted parties could include:

- Communities in the region of operation
- Municipalities
- Employees
- Wildlife and aquatic species

The potential water-related impacts on ecosystems and human health caused by potential pollutants are managed through risk assessments along with established monitoring and reporting requirements. Impacts are assessed in terms published toxicity levels or baseline metrics. Water sources/water supplies in regions of operations are monitored regularly to test for various metrics (pollution).

W-OG3.1a

(W-OG3.1a) For each business division of your organization, describe how your organization minimizes the adverse impacts on water ecosystems or human health of potential water pollutants associated with your oil & gas sector activities.

Potential water pollutant	Business division	Description of water pollutant and potential impacts	Management procedures	Please explain
Hydrocarbons	Upstream Downstream	<p>ie. Natural gas and fuels / petroleum products</p> <p>Upstream impacts: the potential for spills into water bodies near the operation where hydrocarbons are used and/or extracted/produced/refined.</p> <p>Downstream impacts: Water contaminations (groundwater) from pump malfunction or underground storage of hydrocarbons</p> <p>The scale and magnitude is dependent upon various factors, such as the size, location, concentration, etc. of the pollutant (hydrocarbon).</p>	<p>Compliance with effluent quality standards</p> <p>Measures to prevent spillage, leaching and leakages</p> <p>Community/stakeholder engagement</p> <p>Emergency preparedness</p> <p>Other, please specify Monitoring</p>	<p>Suncor complies with effluent quality standards in each region of operation established by the regulator. We are required to report all spills as per approval conditions.</p> <p>The Environmental Health and Safety department has Spill Response Plans and Policies in place for each business unit, where applicable.</p> <p>The Stakeholder relations group is required to contact and inform key stakeholders that are relevant in situations where they may be or are potentially impacted.</p> <p>Crisis management and communications preparedness is controlled by the Environmental Health and Safety Group. They maintain a risk registry, which is part of the Suncor's Operational Excellence Management System. The management team is made up of members from the executive leadership team</p>

				with various roles that tie different business areas together. Each functional business area also has a response team with defined roles and responsibilities.
Chemicals	Upstream Downstream	<p>ie. Metals</p> <p>Upstream & Downstream: chemical pollutants from each business unit would have similar impacts on water ecosystems and human health. The scale and magnitude is dependent upon various factors, such as the size, location, concentration, etc. of the pollutant (chemical).</p>	<p>Compliance with effluent quality standards</p> <p>Measures to prevent spillage, leaching and leakages</p> <p>Community/stakeholder engagement</p> <p>Emergency preparedness</p>	<p>Suncor complies with National Pollutant Release Inventory Reporting (NPRI) Standards.</p> <p>The Stakeholder relations group is required to contact and inform key stakeholders that are relevant in situations where they may be or are potentially impacted.</p> <p>The Environmental Health and Safety department has Spill Response Plans and Policies in place for each business unit where applicable.</p> <p>Crisis management and communications preparedness is controlled by the Environmental Health and Safety Group of Suncor. They maintain a risk registry, which is part of the Operation Excellence Management System. The management team is made up of members from the executive leadership team with various roles that tie different business areas together. Each functional business area also has a response team with defined roles and responsibilities.</p>
Drilling fluids	Upstream	<p>ie. Synthetic-based fluid</p> <p>Upstream: potential leaching into groundwater/aquifer and contaminating water</p> <p>The scale and magnitude is dependent upon various factors, such as the size, location, concentration, etc. of the pollutant (chemical).</p>	<p>Compliance with effluent quality standards</p> <p>Measures to prevent spillage, leaching and leakages</p>	<p>Suncor is required to describe drilling fluids in project applications (i.e. Environmental Protection and Enhancement Act under the Provincial Regulator).</p> <p>The regulation also requires an operator to describe drilling fluid, waste disposal and surface runoff management.</p> <p>The Environmental Health and Safety department has Spill Response Plans and Policies in place for each</p>

			Community/stakeholder engagement	business unit where applicable. Crisis management and communications preparedness is controlled by the Environmental Health and Safety Group of Suncor. They maintain a risk registry, which is part of the Operational Excellence Management System. The management team is made up of members from the executive leadership team with various roles that tie different business areas together. Each functional business area also has a response team with defined roles and responsibilities.
			Emergency preparedness	

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

Full

Risk assessment procedure

Water risks are assessed as part of other company-wide risk assessment system

Frequency of assessment

Annually

How far into the future are risks considered?

>6 years

Type of tools and methods used

Tools on the market

Enterprise Risk Management

Other

Tools and methods used

WWF-DEG Water Risk Filter

ISO 31000 Risk Management Standard

Internal company methods

Comment

Suncor completed a comprehensive water risk assessment for all operations to assess risks such as stakeholder expectations, watershed issues and operational water use. Suncor's tools and methods include Strategic Issues Management Process, Enterprise Risk Management, Materiality Review and the WWF Water Risk Filter.

We also participate in regional watershed initiatives to understand long-term watershed risks around water use and quality to inform our own corporate water strategy.

Supply chain

Coverage

Partial

Risk assessment procedure

Other, please specify

Water/sustainability supplier risks

Frequency of assessment

Annually



How far into the future are risks considered?

Unknown

Type of tools and methods used

Enterprise Risk Management
Other

Tools and methods used

Other, please specify
Suncor’s supplier sustainability supplemental associated with RFPs and prequalification processes

Comment

In 2018 SCM developed and launched a SCM Sustainability Strategy. Our Collecting Supplier Information Committee has undertaken a number of initiatives to better understand the sustainability risks and opportunities within our supply chain. Suncor SCM Sustainability strategy is taking a systems approach to risk management. As such we are in a year of baselining and identifying risks in our supply chain.

Other stages of the value chain

Coverage

None

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	Suncor has developed models and tools that help us to understand available water quantity and quality at the local level. This analysis involves risk assessment, sustainability forecasting and some business

		<p>unit/regional level scenario analysis, which helps inform future business planning. However; these models/tools are being developed to capture basin level projections that would better inform local water risks. Suncor has evaluated water availability (total water withdrawal per capita) using the WWF Water Risk Filter.</p> <p>Suncor participated in the Athabasca River Basin initiative that is a basin wide collaborative effort to create a common understanding of the water management system, issues and opportunities across the Athabasca River Basin.</p>
Water quality at a basin/catchment level	Relevant, always included	<p>Suncor has developed models and tools that help us to understand available water quantity and quality at the local level. This analysis involves risk assessment, sustainability forecasting and some business unit/regional level scenario analysis, which helps inform future business planning. However; these models/tools are being developed to capture basin level projections that would better inform local water risks. Suncor has evaluated water quality (water quality index) using the WWF Water Risk Filter.</p>
Stakeholder conflicts concerning water resources at a basin/catchment level	Relevant, always included	<p>Suncor actively engages with stakeholders with regards to water resources and these issues/risks are part of identified risks. Operational changes to water systems at sites which trigger regulatory applications often requires stakeholder consultation as part of the review. Suncor includes stakeholder assessment and forecasting with regards to water resources at the local level in the ERM process. Suncor participated in the Athabasca River Basin initiative that is a basin wide collaborative effort to create a common understanding of the water management system, issues and opportunities across the Athabasca River Basin.</p>
Implications of water on your key commodities/raw materials	Not relevant, included	<p>We recognize that some of our material commodity inputs (e.g. natural gas, hydrogen) and agricultural feedstock (e.g. corn for ethanol production) may benefit from being further assessed for their water risks – we expect to further evaluate those as part of our next phase of sustainability integration into our business.</p> <p>Future scenario planning is being developed, however current information/tools have limitations for long term predictions.</p>

		<p>Suncor SCM Sustainability strategy is taking a systems approach to risk management. As such we are in a year of baselining and identifying risks in our supply chain. The prequalification assessment in Avetta, our Supplemental included with RFP's and our sustainability assessment of our top suppliers is providing Suncor with a robust foundation of data and information as we progress the SCM strategy.</p>
Water-related regulatory frameworks	Relevant, always included	<p>All of Suncor's operational sites have an operating regulatory approval with limits which typically require monthly and annual reporting to regulatory agencies. Our enterprise risk management system (ERM) and strategic issues management process (SIMP) identify changes to water policy and regulations that are further evaluated for operational / business impacts.</p> <p>Suncor monitors future potential regulatory changes at the federal, provincial/state, and municipal level to understand how these changes could impact operations. Suncor also monitors regulations in other jurisdictions and evaluates potential impacts, timing and risk.</p>
Status of ecosystems and habitats	Not relevant, explanation provided	<p>Suncor monitors and assesses ecosystem impacts in the watersheds in which it operates in on a local level. Our enterprise risk management system (ERM) and strategic issues management process (SIMP) identify and helps manage ecosystem and habitat water related risks. For some operational sites there is greater and more extensive basin impact monitoring. In the Athabasca watershed, Suncor contributed to a regional monitoring of cumulative effects program that spends \$50M dollars per year monitoring impact on the ecosystem. Suncor is a member of a number of watershed planning and advisory committees (WPACs) that evaluate long terms changes to the watershed and advises on potential management actions. Within the Athabasca watershed, Suncor is currently participating in a long-term Athabasca Watershed Basin Initiatives.</p>
Access to fully-functioning, safely managed WASH services for all employees	Relevant, always included	<p>For all of Suncor's sites we have WASH services for all employees. Suncor's operations are in developed countries which all have requirements for worker health and safety as well as water and sanitation provision. Monitoring is required at both the global/national level and at the facility level as per national policies and standards for WASH. The standards cover: water quality, water quantity, water facilities and access to water, wastewater treatment and disposal and other environmental issues.</p>

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	As part of Suncor’s Water Management-Stakeholder Engagement Plans, customers are considered as a component of overall water risk assessment. A potential risk that has been considered in this assessment is reputational risk (part of the Enterprise Risk Management process) on Suncor’s brand with regards to water has been evaluated as a component of the overall water risk assessment file. Customers are informed of water-related risks through the annual Report on Sustainability and various third-party Environmental Social and Governance (ESG) disclosure platforms.
Employees	Relevant, always included	As part of Suncor’s Water Management-Stakeholder Engagement Plans, the evaluation includes employee impact on execution of water management on-site. This included aspects of roles and accountability, complexity and experience. Employees are informed of water-related risks through the annual Report on Sustainability and various third-party Environmental Social and Governance (ESG) disclosure platforms.
Investors	Relevant, always included	As part of Suncor’s Water Management-Stakeholder Engagement Plans, investors or investment organizations have been identified as stakeholders as part of our risk assessment framework. Investors are informed of water-related risks through the annual Report on Sustainability and various third-party Environmental Social and Governance (ESG) disclosure platforms.
Local communities	Relevant, always included	As part of Suncor’s Water Management-Stakeholder Engagement Plans, local communities have been identified and included in Suncor’s water risk assessment for the majority of our operational sites. Local communities located in regions where we operate are consulted prior to and throughout a project. Consultation covers a broad set of issues, water-related issues and risks included. We aim to inform local communities of the water – related risks and the processes we have in place to mitigate these. Communities are also informed of water-related risks through the annual Report on Sustainability and various third-party Environmental Social and Governance (ESG) disclosure platforms.

NGOs	Relevant, always included	NGOs have been identified and included in Suncor's water risk assessment for the majority of our operational sites. Primary areas of focus are related to cumulative impacts of industrial development, with emphasis on low flow water withdrawal of the Athabasca River and water issues as they relate to tailings management. Suncor continues to discuss opportunities with NGOs related to priority areas.
Other water users at a basin/catchment level	Relevant, always included	Some other local water users have been identified as stakeholders that do not fall into the major categories. These would include parties who depend on the same basin/catchment from where we withdrawal water for our operations.
Regulators	Relevant, always included	Regulators have been identified and included in Suncor's water risk assessment for the majority of our major operational sites. Outside of water risk assessment, Suncor has extensive contact with regulators about all our operations. Environmental data typically requires monthly and annual reporting to regulatory agencies.
River basin management authorities	Relevant, always included	Suncor collaborates with river basin management authorities, our operations in North America have to follow government jurisdictions for the specific basins. They are not authorities, but what we term as a council of all watershed users.
Statutory special interest groups at a local level	Relevant, always included	Indigenous communities have been identified as key stakeholders and included in Suncor's overall water risk assessment. In some cases, concerns with fossil fuel development amongst Indigenous communities stems from the value attributed to natural water sources, and the cumulative impacts on industry on local watersheds. Suncor is building ongoing relationships with Indigenous communities through a corporate Social Goal. Suncor is also part of the Athabasca Watershed Council, which is a multi-stakeholder working group to bring together management plans and strategies for the Athabasca specifically.
Suppliers	Relevant, sometimes included	Suncor SCM Sustainability strategy is taking a systems approach to risk management. As such we are in a year of baselining and identifying risks in our supply chain. The prequalification assessment in Avetta, our Supplemental included with RFP's and our sustainability assessment of our top suppliers is providing Suncor with a robust foundation of data and information as we progress the SCM strategy.
Water utilities at a local level	Relevant, sometimes included	Water utilities at a local level are evaluated as part of water risk assessments at this time as part of each projects Environmental Impact Assessment (EIA). Anticipated effects on the environment of a proposed development or project are measured and design measures or other relevant mitigation measures are used to reduce or avoid those effects (ie. resource use, water quality/availability and environmental setting)

Other stakeholder, please specify	Relevant, sometimes included	Multi-stakeholder organizations such as Ceres, have been identified as stakeholders as part of our risk assessment framework. Suncor has had workshops with multiple stakeholders on the development of our post-2016 Sustainability Goals including future water goal development.
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W3.3d

(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.

Suncor has an established Enterprise Risk Management Program (ERM) and an Operational Excellence Management System (OEMS) both of which support effective and efficient risk management across the organization. This requires ongoing identification, assessment, treatment and monitoring of risks inherent to our assets, activities and operations. Our risk management program is aligned with the ISO 31000 Risk management. The guidelines provide principles, a framework and a process for managing risk. Our risk management practice is governed by our Risk Management Policy, and supported through tools such as Risk Management Standards and a Risk Matrix to effectively identify and assess risk across the enterprise. Principal risks are generally considered those that have the potential to materially impact our ability to meet or support our business strategy, which can be assessed on a short-term (1-3 years) or long-term (> 10 years) horizon. Once identified, risks are assessed and evaluated in terms of magnitude of impact and likelihood using a risk-matrix tool. This allows employees to consistently assess risks and evaluate the consequence and likelihood of risk events. It also helps assign different levels of residual risk based on the following health and safety, environment, regulatory, reputational and financial impact. To ensure holistic development and sustainment of physical assets, we incorporate environmental and social aspects such as water use, air emissions, energy use, human rights, stakeholder and Indigenous relations into new projects. Screening assessments help translate relevant social or environmental impacts as potential project risks. For example, climate change implications are considered early in the asset development process, which ensures climate change risks and opportunities are well understood. From a decision-making perspective, this process allows asset development options to be analyzed from both a technical and sustainability perspective.

In order to identify water-related risks within Suncor’s direct operations and other stages of the value chain we use a framework called the Strategic Issues Management Process (SIMP). SIMP is a coordinated, anticipatory approach for identifying, monitoring and managing the key environmental, economic, and social issues considered most critical to Suncor and its external stakeholders. Water management is one of seven critical issues identified under SIMP. SIMP aims to achieve a heightened level of preparedness and enable individuals to align on issue treatment and communications in order to better identify and address key threats and opportunities, through an efficient and proactive framework and centralized resource inventory.



A significant effort has been placed around identifying sustainability risks with our suppliers. Our Collecting Supplier Information Committee has undertaken a number of initiatives to better understand the sustainability risks and opportunities within our supply chain. Suncor SCM Sustainability strategy is taking a systems approach to risk management. As such we are in a year of baselining and identifying risks in our supply chain.

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?

Suncor uses an enterprise-wide risk management system (ERM) to assess and define risk. Like most ERM systems it uses a matrix that determines the consequence of a risk and the likelihood of it occurring. There are six (6) consequence and likelihood categories. The ERM assign risks a ranking from I to IV for economic, environmental and social. Social is further broken down into health & safety, reputation and regulatory with guidance. Suncor defines substantive risks that are risked rank at II or I; to define substantive change for the purpose of this assessment; an economic value of \$10M was used. This includes direct financial costs and lost opportunity value (LOV).

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
Row 1	11	100

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

Canada

River basin

Mackenzie River

Number of facilities exposed to water risk

4

% company-wide facilities this represents

26-50

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

26-50

% company's total global revenue that could be affected

26-50

Comment

These facilities make up our primary oil sands operations and include:

- Oil sands Base plant
- Oil sands Fort Hills
- In situ operations; Firebag & MacKay River



Country/Region

Canada

River basin

St. Lawrence

Number of facilities exposed to water risk

4

% company-wide facilities this represents

26-50

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

26-50

% company's total global revenue that could be affected

1-25

Comment

These facilities make up the majority of our Refining & Marketing operations and include our Sarnia Refinery, Montreal Refinery, Montreal Sulphur Plant and Ethanol Plant.

Country/Region

Canada

River basin

Nelson River

Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

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

1-25

% company's total global revenue that could be affected

Less than 1%

Comment

This facility is one of the refineries included in our Refining & Marketing operations; Edmonton Refinery.

Country/Region

Canada

River basin

Other, please specify

Atlantic Ocean

Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

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

1-25

% company's total global revenue that could be affected

Less than 1%

Comment

This facility is our off shore operation; situated off the east coast of Canada, we operate the Terra Nova Floating Production Storage and Offloading vessel.

Country/Region

United States of America

River basin

Mississippi River

Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

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

1-25

% company's total global revenue that could be affected

Less than 1%

Comment

This facility is one of the refineries included in our Refining & Supply operations; Commerce City Refinery.

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

Canada

River basin

Mackenzie River

Type of risk

Regulatory

Primary risk driver

Regulatory uncertainty

Primary potential impact

Increased operating costs

Company-specific description

There is currently a lack of clarity around regulatory requirements for return of oil sands process affected water (OSPW) back to the watershed during either operational phase or for final closure. The lack of certainty increases risk to long term closure plans as currently constructed and the ability to manage both quantity and quality of water during operational phase of the projects.

Timeframe

More than 6 years

Magnitude of potential impact

High

Likelihood

Unlikely

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure - minimum (currency)

1,000,000,000

Potential financial impact figure - maximum (currency)

2,000,000,000

Explanation of financial impact

Additional containment on site (tailings ponds) would be required for additional containment if no regulatory requirements are established to begin returning water back to the watershed. This would also extend the timeframe for reclamation.

Cost of impact to extraction efficiencies due to lower water quality, requiring additive to partially treat water.

Primary response to risk

Engage with regulators/policymakers

Description of response

Work with provincial and federal government to ensure policy and regulation tools and mechanisms are in place to allow for the release of treated tailings water and help identify and fill gaps as required. Suncor along with 6 other operators has been engaging both Federal and Provincial technical and policy leaders for years to drive discussion towards certainty of regulatory tools for water return to the Athabasca River. Suncor and the other operators through Canada's Oil Sands Innovation Alliance have also been executing projects that will provide technical input into development of policy framework.

There is ongoing investment focused on optimizing water reduction and recycling opportunities, reducing the amount of water retained in tailings and confirming technical understanding and managing all water related impacts. Suncor's own water R&D as well as the technology sharing by 9 oil sands companies on water R&D through the Canadian Oil Sands Innovation Alliance (COSIA) is laying the foundation for further breakthroughs for the region on environmental performance. There has been 257 technology contributions with an estimated value of \$273 million. These projects have the ability to reduce or reuse water on site.

Cost of response

402,000,000

Explanation of cost of response

The estimated cost for the containment strategy is ~\$402 million of infrastructure investment. The execution of this strategy has resulted in a reduction of oil sands water withdrawal by 58% since 2007. There is ongoing investment focused on optimizing water reduction and recycling opportunities, reducing the amount of water retained in tailings and confirming technical understanding and managing all water related impacts.

Country/Region

United States of America

River basin

Mississippi River

Type of risk

Regulatory

Primary risk driver

Other, please specify

Increased water stress & Regulation of discharge quality/volumes

Primary potential impact

Increased operating costs

Company-specific description

There is a potential for water related stress at the Commerce City Refinery. The potential impact of these risks will likely lead to higher operating costs in the long term. The site is also making improvements to the wastewater treatment system to meet incoming regulations for specific contaminants.

Cost of treatment facility being built.

Timeframe

1 - 3 years

Magnitude of potential impact

High

Likelihood

More likely than not

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

500,000,000

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

In order to be compliant with water regulations in the area of operation, the facility would have to update waste water permits.

Primary response to risk

Other, please specify

Infrastructure investment

Description of response

Building a new treatment facility and updating water permits in the area of operations.

Cost of response

6,000,000

Explanation of cost of response

Suncor is undertaking a process that provides correct definition-assessment of this water risk. As this process progresses understanding of the potential issues, the impact and mitigation will be determined. Costs associated with definition have been estimated at \$6M for the facility.

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	<p>Suncor SCM Sustainability strategy is taking a systems approach to risk management. As such we are in a year of baselining and identifying risks in our supply chain. The prequalification assessment in Avetta, our Supplemental included with RFP's and our sustainability assessment of our top suppliers is providing Suncor with a robust foundation of data and information as we progress the SCM strategy.</p> <p>We have undertaken a deeper assessment of our suppliers in the top 50% of our spend. This assessment included review of supplier's ESG reporting including Reports on Sustainability, Supplier Codes of Conduct and response to the CDP. The initial assessments of our top 50% spend have provided SCM sustainability with an indication of strengths and weaknesses within our supply chain as it relates to sustainability.</p> <p>In addition to our Vendor Audit work, Suncor has a robust EH&S audit program as a part of our contractor EHS execution plans at site. As part of our internal management systems we meet with onsite contractors on a regular basis. We hold worksite audits and inspections, lodge inspections and provide toolbox meeting kits to guide EHS discussions with suppliers performing services on our sites. Suncor's senior leadership demonstrate commitment to safety at our sites through the regular participation in safety discussions with contractors, staff and suppliers. Safety reporting is included in our Supplier Performance Management tool.</p> <p>Suncor's OEMS is the framework of controls designed to eliminate the causes of unplanned events and incidents. The OEMS includes a guideline on Contractor Management which establishes the processes and requirements for implementing a systematic contractor management program and a process for management goods and services. The objective of this guideline is to ensure that all purchased good meet quality standards while ensuring all services on conducted in a safe, environmentally sound and cost effective manner.</p>

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

Suncor's tactical water strategy for oil sands and in situ has resulted in a major improvement in water efficiency. All the projects executed reduced water use or make large quantities of water available for reuse.

There is a Water Strategy Leadership Team that focuses on an integrated water management strategy for the site that addresses excess water stored in tailings and establishes water management principles and guidelines for water management. There is ongoing collaboration with industry partners to test drive multiple water technologies concurrently, enabling the partners to conduct more pilots than each could on their own, while sharing the risks and costs. An example of this work is The Water Technology Development Center (WTDC).

Estimated timeframe for realization

>6 years

Magnitude of potential financial impact

Low-medium

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact

The improvement in water efficiency essentially allows Suncor to consistently use less than half of our annual water license allotment from the Athabasca River.

Continuous improvement measures leverage an economic incentive to use less water.

Type of opportunity

Other

Primary water-related opportunity

Other, please specify

Collective active innovation

Company-specific description & strategy to realize opportunity

Suncor has been a leader in improving collaboration among industry peers through organizations such as COSIA.

The SAGD produced water treatment pilot project with COSIA involves testing new water treatment technologies at Suncor's MacKay River

steam assisted gravity drainage facility. There is a potential to improve the reliability and efficiency of in situ water treatment operations in an effort to reduce water usage.

Estimated timeframe for realization

4 to 6 years

Magnitude of potential financial impact

Medium-high

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact

Suncor's own water R&D as well as the technology sharing by 9 oil sands companies on water R&D is laying the foundation for further breakthroughs for the region on environmental performance. For water alone there have been 257 technology contributions with an estimated value of \$273 million.

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)

Oil Sands Base Plant

Country/Region

Canada

River basin

Mackenzie River

Latitude

57.0033

Longitude

-111.4661

Oil & gas sector business division

Upstream

Total water withdrawals at this facility (megaliters/year)

37,442

Comparison of withdrawals with previous reporting year

Higher

Total water discharges at this facility (megaliters/year)

9,693

Comparison of discharges with previous reporting year

Higher

Total water consumption at this facility (megaliters/year)

27,749

Comparison of consumption with previous reporting year

Higher

Facility reference number

Facility 2

Facility name (optional)

In Situ Firebag

Country/Region

Canada

River basin

Mackenzie River

Latitude

57.2297

Longitude

-110.8325

Oil & gas sector business division

Upstream

Total water withdrawals at this facility (megaliters/year)

2,440

Comparison of withdrawals with previous reporting year

Much higher

Total water discharges at this facility (megaliters/year)

1,746

Comparison of discharges with previous reporting year

Much higher

Total water consumption at this facility (megaliters/year)

694

Comparison of consumption with previous reporting year

Lower

Facility reference number

Facility 3

Facility name (optional)

In Situ MacKay River

Country/Region

Canada

River basin

Mackenzie River

Latitude

57.03347

Longitude

-111.88712

Oil & gas sector business division

Upstream

Total water withdrawals at this facility (megaliters/year)

360

Comparison of withdrawals with previous reporting year

Much higher

Total water discharges at this facility (megaliters/year)

7

Comparison of discharges with previous reporting year

Much higher

Total water consumption at this facility (megaliters/year)

353

Comparison of consumption with previous reporting year

Much higher

Facility reference number

Facility 4

Facility name (optional)

Montreal Refinery

Country/Region

Canada

River basin

St. Lawrence

Latitude

45.50806

Longitude

-73.57111

Oil & gas sector business division

Downstream

Total water withdrawals at this facility (megaliters/year)

5,618

Comparison of withdrawals with previous reporting year

Lower

Total water discharges at this facility (megaliters/year)

5,163

Comparison of discharges with previous reporting year

Higher

Total water consumption at this facility (megaliters/year)

455

Comparison of consumption with previous reporting year

Much lower

Facility reference number

Facility 5

Facility name (optional)

Sarnia Refinery

Country/Region

Canada

River basin

St. Lawrence

Latitude

42.9306

Longitude

-82.4433

Oil & gas sector business division

Downstream

Total water withdrawals at this facility (megaliters/year)

34,903

Comparison of withdrawals with previous reporting year

Higher

Total water discharges at this facility (megaliters/year)

34,903

Comparison of discharges with previous reporting year

Higher

Total water consumption at this facility (megaliters/year)

0

Comparison of consumption with previous reporting year

About the same

Facility reference number

Facility 6

Facility name (optional)

Renewables - St. Clair Ethanol Plant

Country/Region

Canada

River basin

St. Lawrence

Latitude

42.9294

Longitude

-82.4381

Oil & gas sector business division

Downstream

Total water withdrawals at this facility (megaliters/year)

1,004

Comparison of withdrawals with previous reporting year

Lower

Total water discharges at this facility (megaliters/year)

100

Comparison of discharges with previous reporting year

Lower

Total water consumption at this facility (megaliters/year)

904

Comparison of consumption with previous reporting year

Lower

Facility reference number

Facility 7

Facility name (optional)

Edmonton Refinery

Country/Region

Canada

River basin

Nelson River

Latitude

53.55558

Longitude

-113.33275

Oil & gas sector business division

Downstream

Total water withdrawals at this facility (megaliters/year)

3,716

Comparison of withdrawals with previous reporting year

Lower

Total water discharges at this facility (megaliters/year)

1,334

Comparison of discharges with previous reporting year

Higher

Total water consumption at this facility (megaliters/year)

2,382

Comparison of consumption with previous reporting year

Lower

Facility reference number

Facility 8

Facility name (optional)

Terra Nova FPSO

Country/Region

Canada

River basin

Other, please specify
Atlantic Ocean

Latitude

46.2831

Longitude

-48.2851

Oil & gas sector business division

Upstream

Total water withdrawals at this facility (megaliters/year)

28,531

Comparison of withdrawals with previous reporting year

Much higher

Total water discharges at this facility (megaliters/year)

20,290

Comparison of discharges with previous reporting year

Much higher

Total water consumption at this facility (megaliters/year)

8,241

Comparison of consumption with previous reporting year

Higher

Facility reference number

Facility 9

Facility name (optional)

Commerce City Refinery

Country/Region

United States of America

River basin

Mississippi River

Latitude

39.80168

Longitude

-104.94698

Oil & gas sector business division

Downstream

Total water withdrawals at this facility (megaliters/year)

3,280

Comparison of withdrawals with previous reporting year

Higher

Total water discharges at this facility (megaliters/year)

1,940

Comparison of discharges with previous reporting year

Higher

Total water consumption at this facility (megaliters/year)

1,340

Comparison of consumption with previous reporting year

Higher

Facility reference number

Facility 10

Facility name (optional)

Montreal Sulphur Plant

Country/Region

Canada

River basin

St. Lawrence

Latitude

45.639381

Longitude

-73.515457

Oil & gas sector business division

Downstream

Total water withdrawals at this facility (megaliters/year)

167

Comparison of withdrawals with previous reporting year

Higher

Total water discharges at this facility (megaliters/year)

0

Comparison of discharges with previous reporting year

About the same

Total water consumption at this facility (megaliters/year)

167

Comparison of consumption with previous reporting year

Higher



Facility reference number

Facility 11

Facility name (optional)

Oil Sands Fort Hills

Country/Region

Canada

River basin

Mackenzie River

Latitude

57.39207

Longitude

111.56791

Oil & gas sector business division

Upstream

Total water withdrawals at this facility (megaliters/year)

25,955

Comparison of withdrawals with previous reporting year

This is our first year of measurement

Total water discharges at this facility (megaliters/year)

993

Comparison of discharges with previous reporting year

This is our first year of measurement

Total water consumption at this facility (megaliters/year)

24,963

Comparison of consumption with previous reporting year

This is our first year of measurement

W5.1a

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

Facility reference number

Facility 1

Facility name

Oil Sands Base Plant

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

36,520

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

922

Produced/Entrained water

0

Third party sources

0

Facility reference number

Facility 2

Facility name

In Situ Firebag

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

1,570

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

800

Produced/Entrained water

Third party sources

70



Facility reference number

Facility 3

Facility name

In Situ MacKay River

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

30

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

330

Produced/Entrained water

Third party sources

0

Facility reference number

Facility 4

Facility name

Montreal Refinery

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

5,480

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

0

Produced/Entrained water

0

Third party sources

138

Facility reference number

Facility 5

Facility name

Sarnia Refinery

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

34,651

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

5

Produced/Entrained water

0

Third party sources

247

Facility reference number

Facility 6

Facility name

Renewables - St. Clair Ethanol Plant

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/Entrained water

0

Third party sources

1,004

Facility reference number

Facility 7

Facility name

Edmonton Refinery

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

2,227

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

0

Produced/Entrained water

0

Third party sources

1,489

Facility reference number

Facility 8

Facility name

Terra Nova FPSO

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

0

Brackish surface water/seawater

28,523

Groundwater - renewable

0

Groundwater - non-renewable

0

Produced/Entrained water

Third party sources

7

Facility reference number

Facility 9

Facility name

Commerce City Refinery

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

70

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

780

Produced/Entrained water

0

Third party sources

2,430

Facility reference number

Facility 10

Facility name

Montreal Sulphur Plant

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

145

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

0

Produced/Entrained water

0

Third party sources

22

Facility reference number

Facility 11

Facility name

Oil Sands Fort Hills

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

25,659

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

296

Produced/Entrained water

0

Third party sources

0

W5.1b

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

Facility reference number

Facility 1

Facility name

Oil Sands Base Plant

Fresh surface water

8,870

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

823

Facility reference number

Facility 2

Facility name

In Situ Firebag

Fresh surface water

1,460

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

286

Facility reference number

Facility 3

Facility name

In Situ MacKay River

Fresh surface water

0

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

7

Facility reference number

Facility 4

Facility name

Montreal Refinery

Fresh surface water

5,025

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

138

Facility reference number

Facility 5

Facility name

Sarnia Refinery

Fresh surface water

34,903

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

0

Facility reference number

Facility 6

Facility name

Renewables - St. Clair Ethanol Plant

Fresh surface water

100

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

0

Facility reference number

Facility 7

Facility name

Edmonton Refinery

Fresh surface water

1,176

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

158

Facility reference number

Facility 8

Facility name

Terra Nova FPSO

Fresh surface water

0

Brackish surface water/Seawater

20,290

Groundwater

0

Third party destinations

0

Facility reference number

Facility 9

Facility name

Commerce City Refinery

Fresh surface water

1,940

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

0

Facility reference number

Facility 10

Facility name

Montreal Sulphur Plant

Fresh surface water

0

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

0

Facility reference number

Facility 11

Facility name

Oil Sands Fort Hills

Fresh surface water

190

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

803

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

Oil Sands Base Plant

% recycled or reused

76-99%

Comparison with previous reporting year

About the same

Please explain



In 2018, the Extraction Recycle Rate at oil sands Base plant was approximately 88%. The upgrader on site had a major turnaround, which impacted extraction operations and caused lower production rates and extraction plants operated with lower water efficiency.

Facility reference number

Facility 2

Facility name

In Situ Firebag

% recycled or reused

76-99%

Comparison with previous reporting year

About the same

Please explain

2018 Operations remained consistent with 2017

Facility reference number

Facility 3

Facility name

In Situ MacKay River

% recycled or reused

76-99%

Comparison with previous reporting year

About the same

Please explain

2018 Operations remained consistent with 2017

Facility reference number

Facility 4

Facility name

Montreal Refinery

% recycled or reused

1-10%

Comparison with previous reporting year

About the same

Please explain

2018 Operations remained consistent with 2017

Facility reference number

Facility 5

Facility name

Sarnia Refinery

% recycled or reused

None

Comparison with previous reporting year

About the same



Please explain

2018 Operations remained consistent with 2017

Facility reference number

Facility 6

Facility name

Renewables - St. Clair Ethanol Plant

% recycled or reused

1-10%

Comparison with previous reporting year

About the same

Please explain

2018 Operations remained consistent with 2017

Facility reference number

Facility 7

Facility name

Edmonton Refinery

% recycled or reused

1-10%

Comparison with previous reporting year

About the same



Please explain

2018 Operations remained consistent with 2017

Facility reference number

Facility 8

Facility name

Terra Nova FPSO

% recycled or reused

None

Comparison with previous reporting year

About the same

Please explain

2018 Operations remained consistent with 2017

Facility reference number

Facility 9

Facility name

Commerce City Refinery

% recycled or reused

1-10%

Comparison with previous reporting year

About the same

Please explain

2018 Operations remained consistent with 2017

Facility reference number

Facility 10

Facility name

Montreal Sulphur Plant

% recycled or reused

None

Comparison with previous reporting year

About the same

Please explain

2018 Operations remained consistent with 2017

Facility reference number

Facility 11

Facility name

Oil Sands Fort Hills

% recycled or reused

51-75%

Comparison with previous reporting year

This is our first year of measurement

Please explain

In 2018, the Extraction Recycle Rate at oil sands Fort Hills was approximately 75%. The site started operations in January 2018 and the production ramped up to full capacity by the end of 2018.

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

76-100

What standard and methodology was used?

This data is assured by Ernst & Young LLP as part of the publication of Suncor's 2018 Report on Sustainability. Their limited assurance procedures were planned and performed in accordance with the International Standard on Assurance Engagements ("ISAE") 3000 Assurance Engagements other than Audits or Reviews of Historical Financial Information". The assurance statement can be found in our Report on Sustainability. Suncor complies with provincial and federal regulatory standards for water monitoring which typically require monthly and/or annual reporting to regulatory agencies. The standards mandate specific technical methods and monitoring boundaries consistent with best practices.

Water withdrawals – volume by source

% verified

Not verified

What standard and methodology was used?

This data is not subject to assurance by a third-party independent assurer but does undergo internal review as part of our quality assurance for publication in our Report on Sustainability. Suncor complies with provincial and federal regulatory standards for water monitoring which typically

require monthly and/or annual reporting to regulatory agencies. The standards mandate specific technical methods and monitoring boundaries consistent with best practices.

Water withdrawals – quality

% verified

Not verified

What standard and methodology was used?

This data is not subject to assurance by a third-party independent assurer, but does undergo internal review as part of our quality assurance. Suncor measures and monitors our water withdrawals quality from the surface. The monitored quality is aligned with water discharge quality effluent parameters. Suncor complies with provincial and federal regulatory standards for water monitoring which typically require monthly and/or annual reporting to regulatory agencies. The standards mandate specific technical methods and monitoring boundaries consistent with best practices.

Water discharges – total volumes

% verified

Not verified

What standard and methodology was used?

This data is not subject to assurance by a third-party independent assurer but does undergo internal review as part of our quality assurance for publication in our Report on Sustainability. Suncor complies with provincial and federal regulatory standards for water monitoring which typically require monthly and/or annual reporting to regulatory agencies. The standards mandate specific technical methods and monitoring boundaries consistent with best practices.

Water discharges – volume by destination

% verified

Not verified

What standard and methodology was used?

This data is not subject to assurance by a third-party independent assurer but does undergo internal review as part of our quality assurance for publication in our Report on Sustainability. Suncor complies with provincial and federal regulatory standards for water monitoring which typically require monthly and/or annual reporting to regulatory agencies. The standards mandate specific technical methods and monitoring boundaries consistent with best practices.

Water discharges – volume by treatment method

% verified

Not verified

What standard and methodology was used?

This data is not subject to assurance by a third-party independent assurer but does undergo internal review as part of our quality assurance for publication in our Report on Sustainability. Suncor complies with provincial and federal regulatory standards for water monitoring which typically require monthly and/or annual reporting to regulatory agencies. The standards mandate specific technical methods and monitoring boundaries consistent with best practices.

Water discharge quality – quality by standard effluent parameters

% verified

Not verified

What standard and methodology was used?

This data is not subject to assurance by a third-party independent assurer but does undergo internal review as part of our quality assurance for publication in our Report on Sustainability. Suncor complies with provincial and federal regulatory standards for water monitoring which typically require monthly and/or annual reporting to regulatory agencies. The standards mandate specific technical methods and monitoring boundaries consistent with best practices.

Water discharge quality – temperature

% verified

Not verified

What standard and methodology was used?

Water discharge quality temperature is monitored at certain facilities, but is not subject to assurance by a third-party independent assurer.

Water consumption – total volume

% verified

Not verified

What standard and methodology was used?

This data is not subject to assurance by a third-party independent assurer but does undergo internal review as part of our quality assurance for publication in our Report on Sustainability. Suncor complies with provincial and federal regulatory standards for water monitoring which typically require monthly and/or annual reporting to regulatory agencies. The standards mandate specific technical methods and monitoring boundaries consistent with best practices.

Water recycled/reused

% verified

Not verified

What standard and methodology was used?

Water recycled/reused volumes are not subject to assurance by a third-party independent assurer, but do undergo internal review as part of our quality assurance for publication in our Report on Sustainability. Suncor complies with provincial and federal regulatory standards for water monitoring which typically require monthly and/or annual reporting to regulatory agencies. The standards mandate specific technical methods and monitoring boundaries consistent with best practices.

W6. Governance

W6.1

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

Yes, we have a documented water policy that is publicly available

W6.1a

(W6.1a) Select the options that best describe the scope and content of your water policy.

	Scope	Content	Please explain
Row 1	Company-wide	<p>Description of water-related performance standards for direct operations</p> <p>Company water targets and goals</p> <p>Commitments beyond regulatory compliance</p> <p>Commitment to water-related innovation</p> <p>Commitment to water stewardship and/or collective action</p>	<p>In 2007 we established a publicly disclosed sustainability water goal for the corporation. Publicly stated goals are intended to drive changes in work place culture and behaviours when combined with processes for goal translation, goal stewardship, development of water risk assessments and tools; and asset development execution models that include environmental net effect evaluation prior to concept selection. We are also focused on extending our commitment to water stewardship by working to develop a new long-term water goal. Our plan is to take a watershed approach to this goal and work with stakeholders and Indigenous communities to determine where we can have the greatest impact. This is an innovative approach to goal setting and we are excited to see the results of the process. Suncor has a publicly available Environment, Health and Safety policy statement:</p> <p>“Suncor is committed to a culture of operational discipline which is foundational in achieving safety, environmental and health and wellness excellence, We are trusted stewards of our natural resources. We lead the way to deliver a healthy environment for today and tomorrow. Environmentally responsible operations are essential to our success.”</p> <p>We have a publicly available Sustainability Statement, which states the following: “We minimize our environmental footprint by designing and operating our facilities to use resources efficiently and by working to develop long-term solutions to global issues, including climate change and biodiversity.”</p> <p>In addition, improvements in water efficiency allow Suncor to consistently use less than half of our</p>

		<p>Other, please specify</p> <p>Incorporated within group environmental, sustainability or EHS policy</p>	<p>annual water license allotment from the Athabasca River. Continuous improvement measures leverage an economic incentive to use less water and allow is to go further than regulatory compliance. Suncor uses four principles to guide our integrated water management approach:</p> <ol style="list-style-type: none"> 1. Shared value of water 2. Watershed management 3. Reduce-Reuse-Return 4. Integrated options analysis
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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) (do not include any names) of the individual(s) on the board with responsibility for water-related issues.

Position of individual	Please explain
Board-level committee	<p>One of the Board’s major duties is to review with management Suncor’s objectives and goals and the strategies and plans for achieving them. The Board also monitors Suncor’s progress toward its strategic goals and plans, and revises Suncor’s direction where warranted. The Board oversees Suncor’s Enterprise Risk Management Program (the “ERM Program”). In accordance with this program, the CEO and senior management undertake an enterprise-wide process to identify, assess and mitigate significant risks. The Board undertakes an annual review of those risks identified by the ERM program as principal risks. The Board monitors risk management actions for these risks throughout the year. In addition to Board oversight of risk management efforts, each principal risk is mapped to a Board Committee or full Board, as appropriate. Environmental issues are mapped to the Environment, Health, Safety and Sustainable Development Committee of the Board, and this committee receives quarterly reports from management.</p> <p>The board is also responsible for ensuring Suncor has an effective strategic planning process, and on an annual basis reviews Suncor’s annual business plan (including Suncor’s annual capital budget) and in doing so endorses the strategies reflected in Suncor’s long range</p>

plan. The Governance Committee provides assistance to the Board by annually assessing Suncor’s planning and budgeting process.

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	<p>Monitoring implementation and performance</p> <p>Reviewing and guiding annual budgets</p> <p>Reviewing and guiding business plans</p> <p>Reviewing and guiding major plans of action</p> <p>Reviewing and guiding risk management policies</p> <p>Reviewing and guiding strategy</p>	<p>One of the Board’s major duties is to review with management Suncor’s objectives and goals and the strategies and plans for achieving them. The Board also monitors Suncor’s progress toward its strategic goals and plans, and revises Suncor’s direction where warranted.</p> <p>The Board oversees Suncor’s Enterprise Risk Management Program (the “ERM Program”). In accordance with this program, the CEO and senior management undertake an entity-wide process to identify, assess and mitigate significant risks. The Board undertakes an annual review of those risks identified by the ERM program as principal risks. The Board monitors risk management actions for these risks throughout the year. In addition to Board oversight of risk management efforts, each principal risk is mapped to a Board Committee or full Board, as appropriate. Environmental issues are mapped to the Environment, Health, Safety and Sustainable Development Committee of the Board, and this committee receives quarterly reports from management.</p> <p>The board is also responsible for ensuring Suncor has an effective strategic planning process, and on an annual basis reviews Suncor’s annual business plan (including Suncor’s annual capital budget) and in doing so endorses the strategies reflected in Suncor’s long range plan. The Governance Committee provides assistance to the Board by annually assessing Suncor’s planning and budgeting process.</p>

		Setting performance objectives	
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W6.3

(W6.3) Provide the highest management-level position(s) or committee(s) with responsibility for water-related issues (do not include the names of individuals).

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

Quarterly

Please explain

The Chief Sustainability Officer (CSO) reports directly to the CEO and President of Suncor. They have a direct link to the Environmental, Health, and Safety & Sustainable Development (EHS&SD) Committee of the Board of Directors.

The CSO is the highest-level management position below the board level where the most significant water-related issues ultimately are managed.

The CSO has a direct link to the EHS&SD Committee, which is a committee of the Board of Directors. The EHS&SD Committee is in place to monitor the effectiveness and integrity of Suncor's internal controls as they related to operational risks of the corporation's physical assets, including water related risk, and other matters of the environment, health, safety and sustainable development. The EHS&SD Committee is also responsible for the review of the policies and practices of the Corporation respecting operational risks.

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 (do not include the names of individuals)?

	Who is entitled to benefit from these incentives?	Indicator for incentivized performance	Please explain
Monetary reward	Chief Sustainability Officer (CSO) Other, please specify Facility Managers, Business Unit Managers and Corporate Executive Team ①	Other, please specify Water-related "growth" projects	We incentivize water performance by progressing projects related to our water stewardship principles that focus on: <ul style="list-style-type: none"> •water conservation •reuse and recycle •return of treated wastewater to the watershed These are reflected in the business unit "growth" component of the AIP. The CSO has also set an annual goal to develop a new enterprise-wide water goal, which is cascaded down through the organization through the goal translation process. Suncor is currently working to establish a new water goal that builds on our ambition to use water more effectively. We anticipate this to be a multi-year, iterative and collaborative process with Indigenous and non-Indigenous communities close to our operations.
Recognition (non-monetary)	Other, please specify Facility Managers,	Reduction of water withdrawals	The President's Operational Excellence Awards (POEAs) recognize and celebrate employees and contractors who demonstrate high-quality, innovative thinking at Suncor.

	Business Unit Managers and Corporate Executive Team ☞ ²	Water-related community project	From managing costs, risks, safety and reliability to minimizing our environmental impacts, nominees demonstrate what can be accomplished when we work together in a disciplined way.
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- ☞¹ • Other, Facility Managers
- Other, Business Unit Managers
- Other, Corporate Executive Team
- ☞² • Other, Facility Managers
- Other, Business Unit Managers
- Other, Corporate Executive Team

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
- Yes, trade associations
- Yes, funding research organizations
- Yes, other

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?

We use a process called Strategic Issues Management Process (SIMP) to manage direct and indirect activities to influence policies to ensure they are consistent with our water policy/commitments. SIMP is a coordinated, anticipatory approach for identifying, monitoring and managing the environmental, economic, and social issues considered most critical to Suncor and its external stakeholders. SIMP is comprised of subject matter experts. The SIMP Water group meets regularly as water-related policies, regulations and issues emerge. It allows us to influence policy in a strategic/tactical manner and ensure we are consistent with our four water principles. Our Environmental Health and Safety Policy states our belief that

environmentally responsible operations are essential includes the responsible use of water. We are in the process of creating a new Water Goal and anticipate this to be a multi-year, iterative and collaborative process with Indigenous and non-Indigenous communities close to our operations. This is expected to support communication and consultation on overall integrated water management. Our production currently requires water use, and there is global concern about how water is used and managed. The current water focus is on integrated water management (water use, withdrawal and return). We use four principles to guide our integrated water management approach, include: Shared value of water, Watershed management, Reduce-Reuse-Return, Integrated options analysis.

W6.6

(W6.6) Did your organization include information about its response to water-related risks in its most recent mainstream financial report?

Yes

 [2018 Annual Report](#)

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	21-30	We have developed models and tools used to anticipate future trends in areas such as energy efficiency, water consumption and recycle, air emissions and land disturbance. We use a Sustainability Planning Forecast that estimates performance metrics over a 10 year outlook on a corporate and facility level. Suncor also uses an annual price planning assumption process, which summarizes our rationale for long-run pricing assumptions and is used in the business plan and all economic evaluations. Outlooks for water prices and other economic related factors which contribute

			<p>to the long term business objectives. Our water management focus includes:</p> <ol style="list-style-type: none"> 1. Optimising water reduction and recycling opportunities while balancing the net environmental impact and associated costs of both. 2. Ongoing management of our water from tailings/ management of water in closure activities. Our Operational Excellence strategic goals are implemented through the goal setting and business planning processes, through which the organization confirms, adjusts and aligns its business direction. <p>Those processes include review of long term business plans, establishment of capital and operating budgets, and goals translation. The intent is to establish the requirements for setting goals and targets and to develop associated business plans. Implementation of these requirements is intended to assist in ensuring expected contributions, priorities and deliverables are understood and followed throughout the organization.</p>
<p>Strategy for achieving long-term objectives</p>	<p>Yes, water-related issues are integrated</p>	<p>21-30</p>	<p>We have developed models and tools used to anticipate future trends in areas such as energy efficiency, water consumption and recycle, air emissions and land disturbance. We use a Sustainability Planning Forecast that estimates performance metrics over a 10 year outlook on a corporate and facility level. Suncor also uses an annual price planning assumption process, which summarizes our rationale for long-run pricing assumptions and is used in the business plan and all economic evaluations. Outlooks for water prices and other economic related factors which contribute to the long term business objectives. Our water management focus includes:</p> <ol style="list-style-type: none"> 1. Optimising water reduction and recycling opportunities while balancing the net environmental impact and associated costs of both. 2. Ongoing management of our water from tailings/ management of water in closure activities. Our Operational Excellence strategic goals are implemented through the goal setting and business planning processes, through which the organization confirms, adjusts and aligns its business direction. <p>Those processes include review of long term business plans, establishment of capital and operating budgets, and goals translation. The intent is to establish the requirements for setting goals and targets and to develop associated business plans. Implementation of these requirements is intended</p>

			to assist in ensuring expected contributions, priorities and deliverables are understood and followed throughout the organization.
Financial planning	Yes, water-related issues are integrated	21-30	<p>We have developed models and tools used to anticipate future trends in areas such as energy efficiency, water consumption and recycle, air emissions and land disturbance. We use a Sustainability Planning Forecast that estimates performance metrics over a 10 year outlook on a corporate and facility level. Suncor also uses an annual price planning assumption process, which summarizes our rationale for long-run pricing assumptions and is used in the business plan and all economic evaluations. Outlooks for water prices and other economic related factors which contribute to the long term business objectives. Our water management focus includes:</p> <ol style="list-style-type: none"> 1. Optimising water reduction and recycling opportunities while balancing the net environmental impact and associated costs of both. 2. Ongoing management of our water from tailings/ management of water in closure activities. Our Operational Excellence strategic goals are implemented through the goal setting and business planning processes, through which the organization confirms, adjusts and aligns its business direction. <p>Those processes include review of long term business plans, establishment of capital and operating budgets, and goals translation. The intent is to establish the requirements for setting goals and targets and to develop associated business plans. Implementation of these requirements is intended to assist in ensuring expected contributions, priorities and deliverables are understood and followed throughout the organization.</p>

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?

Row 1

Water-related CAPEX (+/- % change)



Anticipated forward trend for CAPEX (+/- % change)

Water-related OPEX (+/- % change)

Anticipated forward trend for OPEX (+/- % change)

Please explain

Suncor's accounting system is not setup organizationally to attribute CAPEX and OPEX figures to water from across the company that meets the definitions provided by CDP in the guidance document. As such, any numbers Suncor would produce would be an estimate subject to significant error and not useful for a year over year comparison.

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 used three scenarios defined by IHS Markit as the basis for the development of the Suncor corporate wide climate related scenarios. The IHS Markit Autonomy, Rivalry and Vertigo scenarios have been modified to fit our unique circumstances/needs. Suncor has developed models and tools that allow us to understand available water quantity and quality at the local level. This analysis involves risk assessment, sustainability forecasting and some business unit/regional level scenario analysis, which helps inform future business planning. However; these models/tools are being developed to capture basin level projections that would better inform local water risks. Suncor is actively working on understanding and integrating water related scenario analysis in the corporate climate related scenario analysis, which will help inform business strategy.



W7.3a

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

No

W7.4

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

Row 1

Does your company use an internal price on water?

Yes

Please explain

Suncor’s Operational Excellence strategic goals are implemented through the goal setting and business planning processes, through which the organization confirms, adjusts and aligns its business direction. Those processes include review of long term business plans, establishment of capital and operating budgets, and goals translation. The intent is to establish the requirements for setting goals and targets and to develop associated business plans. Implementation of these requirements is intended to assist in ensuring expected contributions, priorities and deliverables are understood and followed throughout the organization. Suncor uses an annual Price Planning Assumption (PPA) process, which summarizes Suncor’s rationale for long-run pricing assumptions and is used in the business plan and all economic evaluations. Suncor is also developing tools that look specifically at the trade-off between water and other environmental issues.

W8. Targets

W8.1

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

Levels for	Monitoring at	Approach to setting and monitoring targets and/or goals
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	targets and/or goals	corporate level	
Row 1	<p>Business level specific targets and/or goals</p> <p>Activity level specific targets and/or goals</p> <p>Site/facility specific targets and/or goals</p>	None are monitored at corporate level	<p>We are focused on extending our commitment to water stewardship beyond our previous long-term fresh water consumption target (which was achieved) by working to develop a new long-term water goal. Our plan is to take a watershed approach to this goal and work with stakeholders and Indigenous communities to determine where we can have the greatest impact. This is an innovative approach to goal setting and we are excited to see the results of this process.</p> <p>Targets and goals are influenced by Canada’s Oil Sands Innovation Alliance (COSIA), whose members including Suncor are oil sands producers focused on accelerating the pace of improvement in environmental performance in Canada’s oil sands through collaborative action and innovation. COSIA’s Water Environment Priority Area is looking for innovative and sustainable solutions to reduce water use and increase water recycling rates at oil sands mining and in situ operations in order to achieve the Aspiration to “be world leaders in water management, producing Canadian energy with no adverse impact on water.” https://www.cosia.ca/initiatives/water</p> <p>Through COSIA we strive to contribute to achieving the alliance’s two Water Performance Goals, which are focused on reducing freshwater use in the oil sands. The two targets in place include:</p> <ul style="list-style-type: none"> • Reduce freshwater use and intensity by 50% by 2022. • Reduce the net water use intensity from the Athabasca River and its tributaries by 30% by 2022. <p>Suncor provides annual water data and future forecasted data for all sites that operate within the Athabasca River Basin. The COSIA working group monitors and reports annual progress towards these goals.</p> <p>Targets and goals are addressed through multi-stakeholder working groups such as the Athabasca Watershed Council. For the Oil Sands Mining Water Management Agreement for 2018-2019, Suncor agreed to cumulatively limit withdrawals from the Athabasca River. Suncor set and stewarded towards net instantaneous withdrawals to align with the weekly flow triggers and cumulative water use limits of the Surface Water Quantity Management Framework (SWQMF).</p>

			<p>Targets and goals are also influenced by the Alberta Energy Regulator’s (AER) new oil sands directive, the Fluid Tailings Management for Oil Sands Mining Projects (Directive 085). This regulation includes tailings management plan application and tailings performance reporting requirements aligned with the government’s Tailings Management Framework. In 2018 Suncor’s Base Plant oil sands mine monitored and stewarded the total inventory of fluid tailings contained on site. This inventory is tracked through annual assessments and monitoring of bitumen production rates and fluid tailings treatment rates throughout the year to track progress.</p>
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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

Tradeoff

Type of linkage/tradeoff

Increased GHG emissions

Description of linkage/tradeoff

Increased water recycling and a smaller water footprint could lead to more complex water treatment unit processes, which could cause higher energy usage and increased GHG emissions. These would be quantified via emissions reporting.

Policy or action

Suncor includes requirements as part of its asset development execution model to consider net environmental effects as well as potential social impact of development options. The objective is to have environment, social and economics considered prior to concept selection. Water quality/quantity, energy/GHG, air emissions, waste, land impacts/risks are part of the evaluation. There has not been a change in the measured impact of the trade-off in the reporting year.

Linkage or tradeoff

Tradeoff

Type of linkage/tradeoff

Other, please specify

Increased maintenance/reliability costs

Description of linkage/tradeoff

Increased water recycling could degrade circulating water quality leading to increased scaling and corrosion rates and potentially operating performance, and increased maintenance and reliability costs.

Policy or action

Suncor includes requirements as part of its asset development execution model to consider net environmental effects as well as potential social impact of development options. The objective is to have environment, social and economics considered prior to concept selection. Water quality/quantity, energy/GHG, air emissions, waste, land impacts/risks are part of the evaluation. There has not been a change in the measured impact of the trade-off in the reporting year.

Linkage or tradeoff

Tradeoff

Type of linkage/tradeoff

Increased energy use

Description of linkage/tradeoff

Using saline water for oil sands and in situ water makeup requirement could result in reduced water efficiency, increased volume of wastewater disposal, overall higher energy use and increased land disturbance for well and pipeline infrastructure.

Policy or action

Suncor includes requirements as part of its asset development execution model to consider net environmental effects as well as potential social impact of development options. The objective is to have environment, social and economics considered prior to concept selection. Water quality/quantity, energy/GHG, Air emissions, waste, land impacts/risks are part of the evaluation. There has not been a change in the measured impact of the trade-off in the reporting year.

Linkage or tradeoff

Tradeoff

Type of linkage/tradeoff

Increased wastewater treatment

Description of linkage/tradeoff

The need for water return leads to an increase in wastewater treatment. Wastewater treatment allows for water to be returned to the source, but requires a significant amount of energy.

Policy or action

Suncor includes requirements as part of its asset development execution model to consider net environmental effects as well as potential social impact of development options. The objective is to have environment, social and economics considered prior to concept selection. Water quality/quantity, energy/GHG, Air emissions, waste, land impacts/risks are part of the evaluation. There has not been a change in the measured impact of the trade-off in the reporting year.

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.

Advisories

Forward-Looking Statements: These responses contain certain forward-looking statements and forward-looking information (collectively, forward-looking statements) based on Suncor's current expectations, estimates, projections and assumptions that were made by Suncor in light of information available at the time these responses were prepared. Some of the forward-looking statements may be identified by words like "expected", "will", "estimated", "could", "anticipates", "intended", "may", "forecast", "potential", "strategy", "goal", "objective", "outlook", "target" and similar expressions. Forward-looking statements in these responses include references to: Suncor's models and tools to anticipate future trends and sustainability planning forecast; Suncor's goal to improve environmental performance; Suncor's work to establish a new long-term water goal and the timing thereof, and Suncor's ambition to use water more effectively; the expectation that Suncor's Sustainability Planning Forecast will help Suncor to advance its goal of continuing improving environmental performance; the expectation that continued monitoring of the watersheds in which Suncor operates will help the company adapt and continue to take appropriate actions to reduce its water footprint; statements about Suncor's Supply Chain Management Sustainability Strategy and the expected impacts it will have; potential impacts of regulations; the parties that may be impacted through Suncor's water pollutants management procedures; the next phase of sustainability integration into Suncor's business; Suncor's plans with respect to stakeholder engagement with respect to water-related risks; references to Suncor's social goal; potential impact of water risks to the company's business, including the potential timing, financial impact, likelihood and cost to respond and the impact of such response; the belief that



Suncor's own water research and development, as well as the technology sharing through COSIA is laying the foundation for further breakthroughs on environmental performance; potential impact of water opportunities in Suncor's business, including the potential timing and the financial impacts therefrom; expectations relating to technologies, including potential benefits; Suncor's strategies, plans, policies, targets and focuses relating to water and sustainability, and the expected benefits therefrom; the four principles that Suncor will use to guide its integrated water management approach across the company; Suncor striving to continuously improve water performance; and COSIA's water goals and focus.

Forward-looking statements are not guarantees of future performance and involve a number of risks and uncertainties, some that are similar to other oil and gas companies and some that are unique to our company. Suncor's actual results may differ materially from those expressed or implied by our forward-looking statements and you are cautioned not to place undue reliance on them. Suncor's Management's Discussion & Analysis for the first quarter of 2019 and its most recently filed Annual Information Form/Form 40-F, Annual Report to Shareholders and other documents it files from time to time with securities regulatory authorities describe the risks, uncertainties, material assumptions and other factors that could influence actual results and such factors are incorporated herein by reference. Copies of these documents are available without charge from Suncor or by referring to the company's profile on SEDAR at sedar.com or EDGAR at sec.gov. Except as required by applicable securities laws, Suncor disclaims any intention or obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

BOEs: Certain natural gas volumes have been converted to barrels of oil equivalent (boe) on the basis of one barrel to six thousand cubic feet. Any figure presented in boe may be misleading, particularly if used in isolation. A conversion ratio of one barrel of crude oil or natural gas liquids to six thousand cubic feet of natural gas is based on an energy equivalency conversion method primarily applicable at the burner tip and does not necessarily represent a value equivalency at the wellhead. Given that the value ratio based on the current price of crude oil as compared to natural gas is significantly different from the energy equivalency of 6:1, utilizing a conversion on a 6:1 basis may be misleading as an indication of value.

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	Director in Outreach and Disclosure at Suncor Energy	Environment/Sustainability manager

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