

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
Midstream/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 2019	December 31 2019

W0.3

(W0.3) Select the countries/areas 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 rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Vital	Important	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. Suncor has developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production. 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. Suncor is committed to water stewardship and we are developing a robust framework that will more meaningfully focus our future efforts on water.
Sufficient amounts of recycled, brackish and/or produced water available for use	Vital	Important	In 2019, about 92% of the water used by our Extraction operations was recycled tailings water at our oil sands Base Plant operations. 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%. 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. Suncor has developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production. 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.

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 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 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.
Entrained water associated with your metals & mining sector activities - total volumes [only metals and mining sector]	<Not Applicable>	<Not Applicable>
Produced water associated with your oil & gas sector activities - total volumes [only oil and gas sector]	100%	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%. 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.
Water withdrawals quality	51-75	Suncor measures and monitors our surface water withdrawal quality. The monitored quality is aligned with water discharge quality effluent parameters. 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 discharges – total volumes	100%	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. 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 discharges – volumes by destination	100%	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. 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 discharges – volumes by treatment method	100%	The water discharge volumes by treatment method are both measured and monitored. We are required to report this information to regulatory bodies. 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 discharge quality – by standard effluent parameters	100%	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.
Water discharge quality – temperature	1-25	Suncor measures and monitors our water discharge quality effluent parameters required by regulators and those parameters do not include the water temperature. 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.
Water consumption – total volume	100%	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. 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 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	143429.47	About the same	In 2019, we saw improved water efficiency at Base Plant; decreased production and water use at our in situ sites; increased water withdrawal and consumption at Fort Hills as production ramped up; and relatively consistent operations in Refining and Logistics. Our intake of fresh and non-fresh water for 2019 was 143 million cubic metres, similar to 145 million cubic metres in 2018. The water intake is used for refining products, with the balance mainly being consumed in oil and gas production. Thresholds: About the same (0%-5%), Low/High (6%-10%), Much low/Much high (>11%). Data reported is sourced from direct measurements. Total water withdrawal is the removal or purchase of water from any source, permanently or temporarily. Fresh and non-fresh water included. Suncor has developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production. 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. The reported figures satisfy the equation: $W = D + C$ Where, W= total withdrawals D= total discharges C= total consumption 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%.
Total discharges	77103.16	About the same	In 2019, Suncor's total water discharge volume was approximately the same as 2018 volumes. Thresholds: About the same (0%-5%), Low/High (6%-10%), Much low/Much high (>11%). Data reported is sourced from direct measurements. Total water return is water leaving organization's boundary and released to surface water, groundwater or to third parties. Suncor has developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production. 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. The reported figures satisfy the equation: $W = D + C$ Where, W= total withdrawals D= total discharges C= total consumption
Total consumption	66326.31	About the same	Total consumption in 2019 was about the same as 2018 performance as a result of relatively consistent water withdrawal and discharge rates. Thresholds: About the same (0%-5%), Low/High (6%-10%), Much low/Much high (>11%). Data reported is sourced from direct measurements. Water consumption is the total water withdrawn minus water returned and reflects quantity of water used and not returned to its proximate source or no longer available in its original form. Suncor has developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production. 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. The reported figures satisfy the equation: $W = D + C$ Where, W= total withdrawals D= total discharges C= total consumption

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	94098.8	About the same	Suncor's operations include oil sands extraction and upgrading, onshore and offshore oil and gas production, petroleum refining and product marketing under the Petro-Canada™ brand, as well as renewable energy development. Suncor upstream operations includes: Mining, In Situ, and Exploration & Production. Suncor 2019 upstream total water withdrawal volume is 1% lower than 2018 mainly due to improved water efficiency at Base Plant; decreased production and water use at our in situ sites; increased water withdrawal and at Fort Hills as production ramped up; decreased ocean water intake at Terra Nova. Thresholds: About the same (0%-5%), Low/High (6%-10%), Much low/ Much high (>11%). Suncor has developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production. 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.
Total discharges – upstream	33310.46	About the same	Suncor's operations include oil sands extraction and upgrading, onshore and offshore oil and gas production, petroleum refining and product marketing under the Petro-Canada™ brand, as well as renewable energy development. Suncor upstream operations includes: Mining, In Situ, and Exploration & Production. Suncor 2019 upstream total water discharge volume is 2% higher than 2018 mainly due to improved water efficiency at Base Plant; decreased production and water use at our in situ sites; increased water withdrawal and consumption at Fort Hills as production ramped up; increased water discharge at Terra Nova. Thresholds: About the same (0%-5%), Low/High (6%-10%), Much low/ Much high (>11%). Suncor has developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production. 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.
Total consumption – upstream	60788.34	About the same	Suncor's operations include oil sands extraction and upgrading, onshore and offshore oil and gas production, petroleum refining and product marketing under the Petro-Canada™ brand, as well as renewable energy development. Suncor upstream operations includes: Mining, In Situ, and Exploration & Production. Suncor 2019 upstream total water consumption volume is 2% lower than 2018 mainly due to improved water efficiency at Base Plant; decreased production and water use at our in situ sites; increased water consumption at Fort Hills as production ramped up; decreased consumption at Terra Nova. Thresholds: About the same (0%-5%), Low/High (6%-10%), Much low/ Much high (>11%). Suncor has developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production. 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.
Total withdrawals - midstream/downstream	49330.68	About the same	Suncor's operations include oil sands extraction and upgrading, onshore and offshore oil and gas production, petroleum refining and product marketing under the Petro-Canada™ brand, as well as renewable energy development. Suncor downstream operations includes our four refineries located in Edmonton, Alta.; Sarnia, Ont.; Montreal, Que. and Commerce City, Colo. Downstream operations also includes our St. Clair Ethanol Plant the Montreal Sulphur Plant. Suncor 2019 downstream total water withdrawal volume is 1% lower than 2018; Commerce City refinery experienced an increase in water withdrawal due more groundwater intake; The remaining downstream assets had relatively consistent performance compared to 2018. Thresholds: About the same (0%-5%), Low/High (6%-10%), Much low/ Much high (>11%). Suncor has developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production. 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.
Total discharges – midstream/downstream	43792.7	About the same	Suncor's operations include oil sands extraction and upgrading, onshore and offshore oil and gas production, petroleum refining and product marketing under the Petro-Canada™ brand, as well as renewable energy development. Suncor downstream operations includes our four refineries located in Edmonton, Alta.; Sarnia, Ont.; Montreal, Que. and Commerce City, Colo. Downstream operations also includes our St. Clair Ethanol Plant the Montreal Sulphur Plant. Suncor 2019 downstream total water discharge volume is 2% lower than 2018; Commerce City refinery experienced an increase water discharges due to increased flow from remediation wells to the wastewater treatment system; Edmonton refinery water dischargers were lower due to increased production; The remaining downstream assets had relatively consistent performance compared to 2018. Thresholds: About the same (0%-5%), Low/High (6%-10%), Much low/ Much high (>11%). Suncor has developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production. 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.
Total consumption – midstream/downstream	5537.98	About the same	Suncor's operations include oil sands extraction and upgrading, onshore and offshore oil and gas production, petroleum refining and product marketing under the Petro-Canada™ brand, as well as renewable energy development. Suncor downstream operations includes our four refineries located in Edmonton, Alta.; Sarnia, Ont.; Montreal, Que. and Commerce City, Colo. Downstream operations also includes our St. Clair Ethanol Plant the Montreal Sulphur Plant. Suncor 2019 downstream total water consumption volume is 5% higher than 2018; Commerce City refinery experienced a decrease in water consumption due to increased flow from remediation wells to the wastewater treatment system; Edmonton refinery water consumption was higher due to increased production. The remaining downstream assets had relatively consistent performance compared to 2018. Thresholds: About the same (0%-5%), Low/High (6%-10%), Much low/ Much high (>11%). Suncor has developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production. 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.
Total withdrawals – chemicals	<Not Applicable>	<Not Applicable>	<Not Applicable>
Total discharges – chemicals	<Not Applicable>	<Not Applicable>	<Not Applicable>
Total consumption – chemicals	<Not Applicable>	<Not Applicable>	<Not Applicable>
Total withdrawals – other business division	<Not Applicable>	<Not Applicable>	<Not Applicable>
Total discharges – other business division	<Not Applicable>	<Not Applicable>	<Not Applicable>
Total consumption – other business division	<Not Applicable>	<Not Applicable>	<Not Applicable>

W1.2d

(W1.2d) Indicate whether water is withdrawn from areas with water stress and provide the proportion.

	Withdrawals are from areas with water stress	% withdrawn from areas with water stress	Comparison with previous reporting year	Identification tool	Please explain
Row 1	No	<Not Applicable >	<Not Applicable>	WWF Water Risk Filter	According to the definition provided of water-stressed areas (<1700 m3 / (person*year), none of Suncor's operated facilities are in stressed watersheds. We manage limits to oil sands water withdrawal during winter low flow periods through on-site water storage where facility design permits. There are a variety of tools available to assess water stress and risk across our diverse assets. One of the tools that we have used in the past to assess water stress is IPIECAs Global Water Tool for Oil and Gas, which demonstrates that none of the Suncor-operated assets are in basins of high-water stress as per the DJSI definition. Suncor has non-operated assets in the United Kingdom, North Africa, and the Middle East that are located in basins of water stress (less than 1700m3/yr), however, since Suncor is not the operator of these assets, they are not included for consideration for this submission. Our Commerce City refinery in Colorado operates in a region with future potential risk for water stress. According to the World Resources Institute's Aqueduct Water Risk Atlas1, the watershed where the refinery operates is classified as a medium-high overall water risk area. Water management is a priority at Suncor, and we will continue to monitor the status of the basin going forward while focusing on implementing industry-leading innovation at our facilities to reduce, recycle, reuse and return water. 1.(footnote) According to both the World Wildlife Fund's Water Risk Filter Tool and the World Resources Institute's Aqueduct Water Risk Atlas. These tools evaluate overall physical, regulatory and reputational risks at the watershed level and indicate that our Commerce City refinery in Colorado exists within a "medium-high" water stress region of the Mississippi River Basin. Commerce City Water Stress Assessment (Water Risk Atlas). When you use the atlas to evaluate "overall water risk" within the watershed where Commerce City operates, it's in the "medium-high" category (range of 2-3, on a scale of 5 being most extreme risk to physical quantity, quality and regulatory/reputational risks.

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	105805.85	About the same	In 2019, Suncor's fresh water withdrawal volume was 1% higher than 2018; Fresh surface water intake increased due to ramp up of production at Fort Hills and the need to build up initial water inventory; Runoff water decreased in the Fort McMurray area. Threshold: About the same (0%-5%). Total water withdrawal is the removal or purchase of water from any source, permanently or temporarily. Data reported is sourced from direct measurements. If runoff water is not measured, estimate precipitation volume using surface area of operated facility X by the annual precipitation depth. Fresh water is characterized by low TDS content for which limits are defined by regulation in the jurisdiction. Suncor has developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production. 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	27800.57	About the same	In 2019, Suncor's non-fresh water withdrawal volume was 3% lower than 2018; Terra Nova total water consumption was 16% lower than 2018 due to less water injection required for production. Threshold: About the same (0%-5%). Total water withdrawal is the removal or purchase of water from any source, permanently or temporarily. Non-fresh water included. Data reported is sourced from direct measurements. Fresh water is characterized by low TDS content for which limits are defined by regulation in the jurisdiction. Suncor has developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production. Suncor uses a Sustainability Planning Forecast that estimates performance metrics over a 10 year outlook on a corporate and facility level.
Groundwater – renewable	Not relevant	<Not Applicable>	<Not Applicable>	Suncor does not use renewable groundwater in operations.
Groundwater – non-renewable	Relevant	3920	Much higher	In 2019, Suncor's groundwater withdrawal volume was 25% higher than 2018 due to Fort Hills increased saline groundwater intake for well testing. Threshold: Much low/Much high (>11%). Total water withdrawal is the removal or purchase of water from any source, permanently or temporarily. Fresh and non-fresh water included. Data reported is sourced from direct measurements. Fresh water is characterized by low TDS content for which limits are defined by regulation in the jurisdiction. Suncor has developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production. Suncor uses a Sustainability Planning Forecast that estimates performance metrics over a 10 year outlook on a corporate and facility level.
Produced/Entrained water	Relevant		Lower	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, the produced water volume of 39 million m3 is not a new withdrawal. In 2019, Suncor upstream in situ sites (Firebag and MacKay River) production decreased compared to 2018 performance due to curtailment restrictions and site outages. Produced water recycling rate was 96% at our Firebag in-situ operations and 99.6% at our MacKay River in situ operations. At Terra Nova, produced water was lower than 2018 due to less water injection required for production. Suncor has developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production. Suncor uses a Sustainability Planning Forecast that estimates performance metrics over a 10 year outlook.
Third party sources	Relevant	5903.06	About the same	In 2019, Suncor's water withdrawal volume from third party sources was about the same as 2019 performance. There was a small increase of approximately 5%, in water withdrawal from third party sources which is mainly due to lower water withdrawal from other fresh water sources such as the river and rainwater, therefore there was more of a requirement to import water from third parties. About the same (0%-5%). Data reported is sourced from direct measurements. Suncor has developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production. Suncor uses a Sustainability Planning Forecast that estimates performance metrics over a 10 year outlook on a corporate and facility level.

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	54930.72	About the same	In 2019, Suncor's total fresh surface water discharges increased by 2% mainly due to improved water efficiency and water recycle rates at Base plant. Thresholds: About the same (0%-5%). Data reported is sourced from direct measurements. Total water return is water leaving organization's boundary and released to surface water. Fresh water is characterized by a low TDS content for which limits are defined by regulation in the jurisdiction. Suncor has developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production. 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	21282.84	About the same	In 2019, Suncor's total non-fresh water discharges were consistent with 2018 performance due to less ocean water intake at Terra Nova for water injection required for production. Thresholds: About the same (0%-5%). Data reported is sourced from direct measurements. Total water return is water leaving organization's boundary and released to surface water. Non-fresh water included. Fresh water is characterized by a low TDS content for which limits are defined by regulation in the jurisdiction. Suncor has developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production. 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.
Groundwater	Not relevant	<Not Applicable>	<Not Applicable>	Suncor does not discharge groundwater in operations.
Third-party destinations	Relevant	889.59	Much lower	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. In 2019, Suncor's water discharge volume from third party sources was 63% lower than 2018, due to decreased volumes being sent for treatment in our upstream and downstream operations. Threshold: Much low/Much high (>11%). Total water return is water leaving organization's boundary and released to third parties. Data reported is sourced from direct measurements. Suncor has developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production. Suncor uses a Sustainability Planning Forecast that estimates performance metrics over a 10 year outlook on a corporate and facility level.

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)

0.42

Numerator: water aspect

Total water withdrawals

Denominator

Barrel of oil equivalent

Comparison with previous reporting year

Lower

Please explain

In 2019, Suncor upstream total upstream water withdrawal intensity is 6% lower than 2018 mainly due to improved water efficiency at Base Plant; decreased production and water use at our in situ sites; decreased ocean water intake at Terra Nova. Thresholds: About the same (0%-5%), Low/High (6%-10%), Much low/ Much high (>11%). Data reported is sourced from direct measurements. Total water withdrawal is the removal or purchase of water from any source, permanently or temporarily. Fresh and non-fresh water included. This metric is used to monitor our water use and success of process optimization strategies (i.e. recycling, reuse, return strategies).

Business division

Upstream

Water intensity value (m3)

0.27

Numerator: water aspect

Total water consumption

Denominator

Barrel of oil equivalent

Comparison with previous reporting year

Lower

Please explain

In 2019, Suncor upstream total water consumption intensity was 7% lower than 2018 mainly due to improved water efficiency at Base Plant; decreased production and water use at our in situ sites; decreased consumption at Terra Nova. Thresholds: About the same (0%-5%), Low/High (6%-10%), Much low/ Much high (>11%). Data reported is sourced from direct measurements. Total water withdrawal is the removal or purchase of water from any source, permanently or temporarily. Fresh and non-fresh water included. This metric is used to monitor our water use and success of process optimization strategies (i.e. recycling, reuse, return strategies).

Business division

Midstream/Downstream

Water intensity value (m3)

0.28

Numerator: water aspect

Total water withdrawals

Denominator

Barrel of oil equivalent

Comparison with previous reporting year

About the same

Please explain

In 2019, Suncor's downstream total water withdrawal intensity was about the same as 2018 performance mainly due consistent downstream operations. Thresholds: About the same (0%-5%), Low/High (6%-10%), Much low/ Much high (>11%). Data reported is sourced from direct measurements. Total water withdrawal is the removal or purchase of water from any source, permanently or temporarily. Fresh and non-fresh water included. This metric is used to monitor our water use and success of process optimization strategies (i.e. recycling, reuse, return strategies).

Business division

Midstream/Downstream

Water intensity value (m3)

0.03

Numerator: water aspect

Total water consumption

Denominator

Barrel of oil equivalent

Comparison with previous reporting year

About the same

Please explain

In 2019, Suncor's downstream total water consumption intensity was about the same as 2018 performance mainly due consistent downstream operations. Thresholds: About the same (0%-5%), Low/High (6%-10%), Much low/ Much high (>11%). Data reported is sourced from direct measurements. Total water withdrawal is the removal or purchase of water from any source, permanently or temporarily. Fresh and non-fresh water included. This metric is used to monitor our water use and success of process optimization strategies (i.e. 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

26-50

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.

Impact of the engagement and measures of success

As of May 20, 2020, 4,790 suppliers (which accounts for 83% of Suncor's suppliers) have subscribed to Suncor's prequalification program.

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

1-25

% of total procurement spend

1-25

Rationale for the coverage of your engagement

Maturing relationships with a diverse range of suppliers is important as we look to move our company and industry from supply arrangements that are transactional in nature to partnerships that are more strategic. Working together with our vast supply chain network, we are attempting to leverage our collective strengths to amplify innovation and drive sustainability performance.

Impact of the engagement and measures of success

To help facilitate the sharing of innovative practices, we brought together over 200 leaders from across Suncor's supply chain to participate in an interactive forum, called FORGE. The goal in organizing this event was to signal our intention to listen, learn, transform, co-create, innovate and accelerate sustainability and innovation together.

Comment

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?

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

W2.2a

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

Row 1

Total number of fines

1

Total value of fines

% of total facilities/operations associated

9

Number of fines compared to previous reporting year

Higher

Comment

In 2019, an elevated level of total residual chlorine level was found during routine water testing at the wastewater treatment plant at the Sarnia Refinery. The probable cause was identified as a faulty chlorine injection pump, which was replaced with a new pump. Early detection alarms were also put in place. Total value of the fine has not yet been finalized.

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 Midstream/Downstream	I.e. Natural gas and fuels / petroleum products Upstream impacts: the potential for spills into water bodies near the operation where hydrocarbons are used and/or extracted/produced/refined. Downstream impacts: water contamination (groundwater) from pump malfunction or underground storage of hydrocarbons The scale and magnitude is dependent upon various factors, such as the size, location, concentration, etc. of the pollutant (hydrocarbon).	Compliance with effluent quality standards Measures to prevent spillage, leaching and leakages Community/stakeholder engagement Emergency preparedness Other, please specify (Monitoring)	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. The Environmental Health and Safety department has Spill Response Plans and Policies in place for each business unit, where applicable. 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. 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 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 Midstream/Downstream	I.e. Metals 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).	Compliance with effluent quality standards Measures to prevent spillage, leaching and leakages Community/stakeholder engagement Emergency preparedness	Suncor complies with National Pollutant Release Inventory Reporting (NPRI) Standards. 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. The Environmental Health and Safety department has Spill Response Plans and Policies in place for each 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 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.
Drilling fluids	Upstream	I.e. Synthetic-based fluid Upstream: potential leaching into groundwater/aquifer and contaminating water The scale and magnitude is dependent upon various factors, such as the size, location, concentration, etc. of the pollutant (chemical).	Compliance with effluent quality standards Measures to prevent spillage, leaching and leakages Community/stakeholder engagement Emergency preparedness	Suncor is required to describe drilling fluids in project applications (i.e. Environmental Protection and Enhancement Act under the Provincial Regulator). The regulation also requires an operator to describe drilling fluid, waste disposal and surface runoff management. The Environmental Health and Safety department has Spill Response Plans and Policies in place for each 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.

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?

More than 6 years

Type of tools and methods used

Tools on the market

Enterprise Risk Management

Other

Tools and methods used

WWF Water Risk Filter

ISO 31000 Risk Management Standard

Internal company methods

Other, please specify (IPIECAs Global Water Tool for Oil and Gas)

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/ IPIECA Global Water Tool for Oil and Gas. 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 Sustainability formalized a Supply Chain Management Sustainability Strategy. The strategy was developed based on Suncor's reported materiality assessment for our Report on Sustainability, Suncor's priority issues, our Corporate Goals, expectations of stakeholders and other thought leadership. The process took into account internal and external inputs and material issues. This assessment identified six priority areas for Suncor Supply Chain Management and provided us with the systematic approach to gathering information based on risk at every step of our supply chain. These areas of focus are designed to progress our sustainability strategy and are aligned with our Corporate goals including Suncor's Social Goal and our GHG Goal. The six areas are: 1. Indigenous Business Development 2. GHG Emissions 3. Inclusion and Diversity 4. Human Rights & Ethics 5. Community Investment 6. Water Stewardship

Other stages of the value chain

Coverage

None

Risk assessment procedure

<Not Applicable>

Frequency of assessment

<Not Applicable>

How far into the future are risks considered?

<Not Applicable>

Type of tools and methods used

<Not Applicable>

Tools and methods used

<Not Applicable>

Comment

W3.3b

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

	Relevance & inclusion	Please explain
Water availability at a basin/catchment level	Relevant, always included	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 availability (total water withdrawal per capita) using the WWF Water Risk Filter. 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.
Water quality 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 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.
Stakeholder conflicts concerning water resources at a basin/catchment level	Relevant, always included	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.
Implications of water on your key commodities/raw materials	Not relevant, included	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. Future scenario planning is being developed, however current information/tools have limitations for long term predictions. 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-related regulatory frameworks	Relevant, always included	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. 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.
Status of ecosystems and habitats	Not relevant, explanation provided	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.
Access to fully-functioning, safely managed WASH services for all employees	Relevant, always included	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.
Other contextual issues, please specify	Please select	

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. We engage with a wide range of diverse stakeholders to consider their issues and concerns about our operations and the effects of proposed development. This includes working together to mitigate potential social, environmental, and economic impacts, and ensuring that local communities benefit from development. We engage with stakeholders in multiple ways, including meetings, workshops, and conferences.
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. We engage with a wide range of diverse stakeholders to consider their issues and concerns about our operations and the effects of proposed development. This includes working together to mitigate potential social, environmental, and economic impacts, and ensuring that local communities benefit from development. We engage with stakeholders in multiple ways, including meetings, workshops, and conferences.
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. We engage with a wide range of diverse stakeholders to consider their issues and concerns about our operations and the effects of proposed development. This includes working together to mitigate potential social, environmental, and economic impacts, and ensuring that local communities benefit from development. We engage with stakeholders in multiple ways, including meetings, workshops, and conferences.
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. We engage with a wide range of diverse stakeholders to consider their issues and concerns about our operations and the effects of proposed development. This includes working together to mitigate potential social, environmental, and economic impacts, and ensuring that local communities benefit from development. We engage with stakeholders in multiple ways, including meetings, workshops, and conferences.
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. We engage with a wide range of diverse stakeholders to consider their issues and concerns about our operations and the effects of proposed development. This includes working together to mitigate potential social, environmental, and economic impacts, and ensuring that local communities benefit from development. We engage with stakeholders in multiple ways, including meetings, workshops, and conferences.
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. We engage with a wide range of diverse stakeholders to consider their issues and concerns about our operations and the effects of proposed development. This includes working together to mitigate potential social, environmental, and economic impacts, and ensuring that local communities benefit from development. We engage with stakeholders in multiple ways, including meetings, workshops, and conferences.
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. We engage with a wide range of diverse stakeholders to consider their issues and concerns about our operations and the effects of proposed development. This includes working together to mitigate potential social, environmental, and economic impacts, and ensuring that local communities benefit from development. We engage with stakeholders in multiple ways, including meetings, workshops, and conferences.
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. We engage with a wide range of diverse stakeholders to consider their issues and concerns about our operations and the effects of proposed development. This includes working together to mitigate potential social, environmental, and economic impacts, and ensuring that local communities benefit from development. We engage with stakeholders in multiple ways, including meetings, workshops, and conferences.
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. We engage with a wide range of diverse stakeholders to consider their issues and concerns about our operations and the effects of proposed development. This includes working together to mitigate potential social, environmental, and economic impacts, and ensuring that local communities benefit from development. We engage with stakeholders in multiple ways, including meetings, workshops, and conferences.
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. We engage with a wide range of diverse stakeholders to consider their issues and concerns about our operations and the effects of proposed development. This includes working together to mitigate potential social, environmental, and economic impacts, and ensuring that local communities benefit from development. We engage with stakeholders in multiple ways, including meetings, workshops, and conferences.
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 (i.e. resource use, water quality/availability and environmental setting). We engage with a wide range of diverse stakeholders to consider their issues and concerns about our operations and the effects of proposed development. This includes working together to mitigate potential social, environmental, and economic impacts, and ensuring that local communities benefit from development. We engage with stakeholders in multiple ways, including meetings, workshops, and conferences.
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.

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 ranked 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). Examples of impacts considered include regulatory, environment, health and safety, reputation, and financial.

W4.1b

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

	Total number of facilities exposed to water risk	% company wide facilities this represents	Comment
Row 1	11	100	For more information on Suncor's operations please visit: https://sustainability.suncor.com/en/our-business/operations-summary

W4.1c

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

Country/Area & River basin

Canada	Mackenzie River
--------	-----------------

Number of facilities exposed to water risk

4

% company-wide facilities this represents

26-50

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

<Not Applicable>

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

<Not Applicable>

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

26-50

% company's total global revenue that could be affected

41-50

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/Area & River basin

Canada	St. Lawrence
--------	--------------

Number of facilities exposed to water risk

4

% company-wide facilities this represents

26-50

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

<Not Applicable>

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

<Not Applicable>

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

26-50

% company's total global revenue that could be affected

51-60

Comment

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

Country/Area & River basin

Canada	Nelson River
--------	--------------

Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

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

<Not Applicable>

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

<Not Applicable>

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

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 & Logistics operations; Edmonton Refinery.

Country/Area & River basin

Canada	Other, please specify (Atlantic Ocean)
--------	--

Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

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

<Not Applicable>

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

<Not Applicable>

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

1-25

% company's total global revenue that could be affected

1-10

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/Area & River basin

United States of America	Mississippi River
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Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

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

<Not Applicable>

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

<Not Applicable>

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

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 & Logistics 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/Area & River basin

Canada	Mackenzie River
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Type of risk & Primary risk driver

Regulatory	Regulatory uncertainty
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Primary potential impact

Increased operating costs

Company-specific description

There is currently a lack of clarity around regulatory requirements for release 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)

<Not Applicable>

Potential financial impact figure - minimum (currency)

100000000

Potential financial impact figure - maximum (currency)

200000000

Explanation of financial impact

Additional containment on site (tailings ponds) would be required for additional containment if no regulatory requirements are established to begin releasing 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

Other, please specify (Engage with regulators/policymakers, Increased investment in new technology, and Improve monitoring)

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

400000000

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/Area & River basin

United States of America	Mississippi River
--------------------------	-------------------

Type of risk & Primary risk driver

Physical	Increased water stress
----------	------------------------

Primary potential impact

Increased operating costs

Company-specific description

According to the definition provided of water-stressed areas (<1700 m3 / (person*year), none of Suncor's operated facilities are in stressed watersheds. We manage limits to oil sands water withdrawal during winter low flow periods through on-site water storage where facility design permits. Our Commerce City refinery in Colorado operates in a region with future potential risk for water stress. According to the World Resources Institute's Aqueduct Water Risk Atlas, the watershed where the refinery operates is classified as a medium-high overall water risk area. Water management is a priority at Suncor and we will continue to monitor the status of the basin going forward while focusing on implementing industry-leading innovation at our facilities to reduce, recycle, reuse and return water. 1(footnote) According to both the World Wildlife Fund's Water Risk Filter Tool and the World Resources Institute's Aqueduct Water Risk Atlas. These tools evaluate overall physical, regulatory and reputational risks at the watershed level and indicate that our Commerce City refinery in Colorado exists within a "medium-high" water stress region of the Mississippi River Basin. Commerce City Water Stress Assessment (Water Risk Atlas). When you use the atlas to evaluate "overall water risk" within the watershed where Commerce City operates, it's in the "medium-high" category (range of 2-3, on a scale of 5 being most extreme risk to physical quantity, quality and regulatory/reputational risks 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.

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)

500000000

Potential financial impact figure - minimum (currency)

<Not Applicable>

Potential financial impact figure - maximum (currency)

<Not Applicable>

Explanation of financial impact

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

Primary response to risk

Other, please specify (Establish site-specific targets Infrastructure investment)

Description of response

Ongoing assessment and updating water permits in the area of operations. Our Commerce City refinery uses both city water and collected groundwater for steam production and cooling, as well as to wash out the natural contaminants in crude oil, like salts and minerals, to prevent corrosion in our processing units. Much of this water is recycled for reuse at our facility, and the remaining portion is treated and discharged to local waterway, Sand Creek, under a permit issued by the Colorado Department of Public Health and Environment (CDPHE). In September 2012, stricter compliance criteria were set on the refinery discharge water, to be effective in January 2018. To meet the new criteria, the Commerce City refinery commissioned a \$65 million upgrade to our existing wastewater treatment facility. The upgrade was completed in December 2017 and leverages a unique technology called membrane ultrafiltration to treat and filter the water. Our facility is one of the first in North America to use this technology in treating refinery wastewater streams. Ongoing and future construction phases will enable us to strive to continuously improve our environmental performance as well as meet increasingly tightening regulations related to wastewater treatment and discharge.

Cost of response

6000000

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	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. 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. 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. 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.

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

More than 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)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

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)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

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, water accounting data, and a comparison with the previous reporting year.

Facility reference number

Facility 1

Facility name (optional)

Oil Sands Base Plant

Country/Area & River basin

Canada	Mackenzie River
--------	-----------------

Latitude

57.0033

Longitude

-111.4661

Located in area with water stress

No

Primary power generation source for your electricity generation at this facility

<Not Applicable>

Oil & gas sector business division

Upstream

Total water withdrawals at this facility (megaliters/year)

31680

Comparison of total withdrawals with previous reporting year

Much lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

30820

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

860

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

11210

Comparison of total discharges with previous reporting year

Much higher

Discharges to fresh surface water

11010

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

200

Total water consumption at this facility (megaliters/year)

20470

Comparison of total consumption with previous reporting year

Much lower

Please explain

Suncor's oil sands mining operations are located near Fort McMurray in Alberta. In 2019, Base Plant total water consumption was 26% lower than 2018. Water withdrawal decreased by 15% due to less river water intake and decreased industrial run-off. Water discharges increased by 15% due to improved water efficiency and water recycle rates. Thresholds: About the same (0%-5%), Low/High (6%-10%), Much low/ Much high (>11%). Data reported is sourced from direct measurements. Total water withdrawal is the removal or purchase of water from any source, permanently or temporarily. Fresh and non-fresh water included. Total water return is water leaving organization's boundary and released to surface water, groundwater or to third parties. Fresh water is characterized by a low TDS content for which limits are defined by regulation in the jurisdiction. Water consumption is the total water withdrawn minus water returned and reflects quantity of water used and not returned to its proximate source or no longer available in its original form. Suncor has developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production. 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.

Facility reference number

Facility 2

Facility name (optional)

In Situ Firebag

Country/Area & River basin

Canada	Mackenzie River
--------	-----------------

Latitude

57.2297

Longitude

-110.8325

Located in area with water stress

No

Primary power generation source for your electricity generation at this facility

<Not Applicable>

Oil & gas sector business division

Upstream

Total water withdrawals at this facility (megaliters/year)

1920

Comparison of total withdrawals with previous reporting year

Much lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

1020

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

820

Withdrawals from produced/entrained water**Withdrawals from third party sources**

80

Total water discharges at this facility (megaliters/year)

920

Comparison of total discharges with previous reporting year

Much lower

Discharges to fresh surface water

870

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

50

Total water consumption at this facility (megaliters/year)

1000

Comparison of total consumption with previous reporting year

Much higher

Please explain

Suncor's oil sands in situ operations are located near Fort McMurray in Alberta. In 2019, Firebag total water consumption was 44% higher than 2018. Water withdrawal decreased by 21% due to less river water intake and decreased industrial run-off. Water discharges decreased by 44% due to curtailment restrictions and site outages during 2019, which led to decreased water efficiency on site. Thresholds: About the same (0%-5%), Low/High (6%-10%), Much low/ Much high (>11%). Data reported is sourced from direct measurements. Total water withdrawal is the removal or purchase of water from any source, permanently or temporarily. Fresh and non-fresh water included. Produced water is not included. Total water return is water leaving organization's boundary and released to surface water, groundwater or to third parties. Fresh water is characterized by a low TDS content for which limits are defined by regulation in the jurisdiction. Water consumption is the total water withdrawn minus water returned and reflects quantity of water used and not returned to its proximate source or no longer available in its original form. Suncor has developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production. To advance Suncor's goal to continue improving environmental performance, Suncor uses a Sustainability Planning Forecast that estimates performance metrics over a 10 yr outlook on a corporate and facility level.

Facility reference number

Facility 3

Facility name (optional)

In Situ MacKay River

Country/Area & River basin

Canada	Mackenzie River
--------	-----------------

Latitude

57.03347

Longitude

-111.88712

Located in area with water stress

No

Primary power generation source for your electricity generation at this facility

<Not Applicable>

Oil & gas sector business division

Upstream

Total water withdrawals at this facility (megaliters/year)

260

Comparison of total withdrawals with previous reporting year

Much lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

50

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

210

Withdrawals from produced/entrained water

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

10

Comparison of total discharges with previous reporting year

Much higher

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

10

Total water consumption at this facility (megaliters/year)

250

Comparison of total consumption with previous reporting year

Much lower

Please explain

Suncor's oil sands in situ operations are located near Fort McMurray in Alberta. In 2019, MacKay River total water consumption was 29% lower than 2018. Water withdrawal decreased by 28% due to less ground water intake caused by curtailment restrictions and site outages. Water discharges increased by 43% due to increased volumes sent for wastewater treatment. Thresholds: About the same (0%-5%), Low/High (6%-10%), Much low/ Much high (>11%). Data reported is sourced from direct measurements. Total water withdrawal is the removal or purchase of water from any source, permanently or temporarily. Fresh and non-fresh water included. Produced water is not included. Total water return is water leaving organization's boundary and released to surface water, groundwater or to third parties. Fresh water is characterized by a low TDS content for which limits are defined by regulation in the jurisdiction. Water consumption is the total water withdrawn minus water returned and reflects quantity of water used and not returned to its proximate source or no longer available in its original form. Suncor has developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production. To advance Suncor's goal to continue improving environmental performance, Suncor uses a Sustainability Planning Forecast that estimates performance metrics over a 10 yr outlook on a corporate and facility level.

Facility reference number

Facility 4

Facility name (optional)

Montreal Refinery

Country/Area & River basin

Canada	St. Lawrence
--------	--------------

Latitude

45.50806

Longitude

-73.57111

Located in area with water stress

No

Primary power generation source for your electricity generation at this facility

<Not Applicable>

Oil & gas sector business division

Midstream/Downstream

Total water withdrawals at this facility (megaliters/year)

5525.58

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

5334.02

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

191.56

Total water discharges at this facility (megaliters/year)

5054.82

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

4863.26

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

191.56

Total water consumption at this facility (megaliters/year)

470.76

Comparison of total consumption with previous reporting year

About the same

Please explain

Suncor operates refineries in Alberta, Ontario and Quebec, Canada, and in Colorado, USA. In 2019, Montreal refinery total water consumption was ~3% higher than 2018. Water withdrawal decreased by ~2% due to less river water intake (caused by a 4% decreased in production) and decreased industrial run-off. Water discharges decreased by ~2%, relatively consistent with 2018 operations. Thresholds: About the same (0%-5%), Low/High (6%-10%), Much low/ Much high (>11%). Data reported is sourced from direct measurements. Total water withdrawal is the removal or purchase of water from any source, permanently or temporarily. Fresh and non-fresh water included. Total water return is water leaving organization's boundary and released to surface water, groundwater or to third parties. Fresh water is characterized by a low TDS content for which limits are defined by regulation in the jurisdiction. Water consumption is the total water withdrawn minus water returned and reflects quantity of water used and not returned to its proximate source or no longer available in its original form. Suncor has developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production. 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.

Facility reference number

Facility 5

Facility name (optional)

Sarnia Refinery

Country/Area & River basin

Canada	St. Lawrence
--------	--------------

Latitude

42.9306

Longitude

-82.4433

Located in area with water stress

No

Primary power generation source for your electricity generation at this facility

<Not Applicable>

Oil & gas sector business division

Midstream/Downstream

Total water withdrawals at this facility (megaliters/year)

34630

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

34390

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

240

Total water discharges at this facility (megaliters/year)

34630

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

34630

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

0

Comparison of total consumption with previous reporting year

About the same

Please explain

Suncor operates refineries in Alberta, Ontario and Quebec, Canada, and in Colorado, USA. In 2019, Sarnia refinery total water consumption was consistent with 2018. Water withdrawal decreased by ~1% due to less ground water intake and decreased water taken from third party sources. Water discharges decreased by ~1% as a result. 2019 operations were consistent with 2018 performance. Thresholds: About the same (0%-5%), Low/High (6%-10%), Much low/ Much high (>11%). Data reported is sourced from direct measurements. Total water withdrawal is the removal or purchase of water from any source, permanently or temporarily. Fresh and non-fresh water included. Total water return is water leaving organization's boundary and released to surface water, groundwater or to third parties. Fresh water is characterized by a low TDS content for which limits are defined by regulation in the jurisdiction. Water consumption is the total water withdrawn minus water returned and reflects quantity of water used and not returned to its proximate source or no longer available in its original form. Suncor has developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production. 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.

Facility reference number

Facility 6

Facility name (optional)

Renewables - St. Clair Ethanol Plant

Country/Area & River basin

Canada	St. Lawrence
--------	--------------

Latitude

42.9294

Longitude

-82.4381

Located in area with water stress

No

Primary power generation source for your electricity generation at this facility

<Not Applicable>

Oil & gas sector business division

Midstream/Downstream

Total water withdrawals at this facility (megaliters/year)

1017.51

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

1017.51

Total water discharges at this facility (megaliters/year)

98.42

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

98.42

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

919.08

Comparison of total consumption with previous reporting year

About the same

Please explain

Suncor operates Canada's largest ethanol facility — the St. Clair Ethanol Plant in the Sarnia-Lambton region of Ontario. In 2019, St. Clair ethanol plant total water consumption was ~2% higher than 2018. Water withdrawal decreased by ~1% due to less water intake from third party sources and water discharges decreased by ~2% as a result. 2019 operations were consistent with 2018 performance. Thresholds: About the same (0%-5%), Low/High (6%-10%), Much low/ Much high (>11%). Data reported is sourced from direct measurements. Total water withdrawal is the removal or purchase of water from any source, permanently or temporarily. Fresh and non-fresh water included. Total water return is water leaving organization's boundary and released to surface water, groundwater or to third parties. Fresh water is characterized by a low TDS content for which limits are defined by regulation in the jurisdiction. Water consumption is the total water withdrawn minus water returned and reflects quantity of water used and not returned to its proximate source or no longer available in its original form. Suncor has developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production. 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.

Facility reference number

Facility 7

Facility name (optional)

Edmonton Refinery

Country/Area & River basin

Canada	Nelson River
--------	--------------

Latitude

53.55558

Longitude

-113.33275

Located in area with water stress

No

Primary power generation source for your electricity generation at this facility

<Not Applicable>

Oil & gas sector business division

Midstream/Downstream

Total water withdrawals at this facility (megaliters/year)

3825.18

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

2119.44

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

1705.74

Total water discharges at this facility (megaliters/year)

1062.84

Comparison of total discharges with previous reporting year

Much lower

Discharges to fresh surface water

999.04

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

63.81

Total water consumption at this facility (megaliters/year)

2762.33

Comparison of total consumption with previous reporting year

Much higher

Please explain

Suncor operates refineries in Alberta, Ontario and Quebec, Canada, and in Colorado, USA. In 2019, Edmonton refinery total water consumption was 16% higher than 2018. Water withdrawal increased by 3% due to more third party water intake and increased industrial run-off. Water discharges decreased by 20% due to increased production. Thresholds: About the same (0%-5%), Low/High (6%-10%), Much low/ Much high (>11%). Data reported is sourced from direct measurements. Total water withdrawal is the removal or purchase of water from any source, permanently or temporarily. Fresh and non-fresh water included. Total water return is water leaving organization's boundary and released to surface water, groundwater or to third parties. Fresh water is characterized by a low TDS content for which limits are defined by regulation in the jurisdiction. Water consumption is the total water withdrawn minus water returned and reflects quantity of water used and not returned to its proximate source or no longer available in its original form. Suncor has developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production. 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.

Facility reference number

Facility 8

Facility name (optional)

Terra Nova FPSO

Country/Area & River basin

Canada	Other, please specify (Atlantic Ocean)
--------	--

Latitude

46.2831

Longitude

-48.2851

Located in area with water stress

No

Primary power generation source for your electricity generation at this facility

<Not Applicable>

Oil & gas sector business division

Upstream

Total water withdrawals at this facility (megaliters/year)

27808.8

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

27800.57

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

Withdrawals from third party sources

8.23

Total water discharges at this facility (megaliters/year)

20910.46

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

20910.46

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

6898.34

Comparison of total consumption with previous reporting year

Much lower

Please explain

Suncor Energy operates Terra Nova located offshore approximately 350 kilometres southeast of Newfoundland and Labrador. In 2019, Terra Nova total water consumption was 16% lower than 2018 due to less water injection required for production. Water withdrawal decreased by 3% due to less ocean water intake. Water discharges increased by 3% due to usage of water for offshore activities. Thresholds: About the same (0%-5%), Low/High (6%-10%), Much low/ Much high (>11%). Data reported is sourced from direct measurements. Total water withdrawal is the removal or purchase of water from any source, permanently or temporarily. Fresh and non-fresh water included. Produced water is not included. Total water return is water leaving organization's boundary and released to surface water, groundwater or to third parties. Fresh water is characterized by a low TDS content for which limits are defined by regulation in the jurisdiction. Water consumption is the total water withdrawn minus water returned and reflects quantity of water used and not returned to its proximate source or no longer available in its original form. Suncor has developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production. 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.

Facility reference number

Facility 9

Facility name (optional)

Commerce City Refinery

Country/Area & River basin

United States of America

Mississippi River

Latitude

39.80168

Longitude

-104.94698

Located in area with water stress

No

Primary power generation source for your electricity generation at this facility

<Not Applicable>

Oil & gas sector business division

Midstream/Downstream

Total water withdrawals at this facility (megaliters/year)

3550

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

60

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

1100

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

2390

Total water discharges at this facility (megaliters/year)

2340

Comparison of total discharges with previous reporting year

Much higher

Discharges to fresh surface water

2340

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

1210

Comparison of total consumption with previous reporting year

Lower

Please explain

Suncor operates refineries in Alberta, Ontario and Quebec, Canada, and in Colorado, USA. In 2019, Commerce City refinery total water consumption was 10% lower than 2018. Water withdrawal increased by 8% due to more ground water intake. Water discharges increased by 20% due to increased flow from remediation wells to the wastewater treatment system. Thresholds: About the same (0%-5%), Low/High (6%-10%), Much low/ Much high (>11%). Data reported is sourced from direct measurements. Total water withdrawal is the removal or purchase of water from any source, permanently or temporarily. Fresh and non-fresh water included. Total water return is water leaving organization's boundary and released to surface water, groundwater or to third parties. Fresh water is characterized by a low TDS content for which limits are defined by regulation in the jurisdiction. Water consumption is the total water withdrawn minus water returned and reflects quantity of water used and not returned to its proximate source or no longer available in its original form. Suncor has developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production. 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.

Facility reference number

Facility 10

Facility name (optional)

Montreal Sulphur Plant

Country/Area & River basin

Canada

St. Lawrence

Latitude

45.639381

Longitude

-73.515457

Located in area with water stress

No

Primary power generation source for your electricity generation at this facility

<Not Applicable>

Oil & gas sector business division

Midstream/Downstream

Total water withdrawals at this facility (megaliters/year)

165

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

140

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

25

Total water discharges at this facility (megaliters/year)

0

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

165

Comparison of total consumption with previous reporting year

About the same

Please explain

Suncor operates its Montreal Sulphur Plant in Quebec, Canada. In 2019, the Sulphur plant total water consumption was ~1% lower than 2018. Water withdrawal decreased by ~1% due to less river water intake and decreased water from third party sources. Water discharges remained consistent with 2018 performance. Thresholds: About the same (0%-5%), Low/High (6%-10%), Much low/ Much high (>11%). Data reported is sourced from direct measurements. Total water withdrawal is the removal or purchase of water from any source, permanently or temporarily. Fresh and non-fresh water included. Total water return is water leaving organization's boundary and released to surface water, groundwater or to third parties. Fresh water is characterized by a low TDS content for which limits are defined by regulation in the jurisdiction. Water consumption is the total water withdrawn minus water returned and reflects quantity of water used and not returned to its proximate source or no longer available in its original form. Suncor has developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production. 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.

Facility reference number

Facility 11

Facility name (optional)

Oil Sands Fort Hills

Country/Area & River basin

Canada

Mackenzie River

Latitude

57.39207

Longitude

111.56791

Located in area with water stress

No

Primary power generation source for your electricity generation at this facility

<Not Applicable>

Oil & gas sector business division

Upstream

Total water withdrawals at this facility (megaliters/year)

32430

Comparison of total withdrawals with previous reporting year

Much higher

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

31500

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

930

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

260

Comparison of total discharges with previous reporting year

Much lower

Discharges to fresh surface water

120

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

140

Total water consumption at this facility (megaliters/year)

32170

Comparison of total consumption with previous reporting year

Much higher

Please explain

Suncor's oil sands mining operations are located near Fort McMurray in Alberta. In 2019, FH water consumption was 29% higher than 2018. Water withdrawal increased by 25% due to more river water intake and groundwater intake. Water discharges decreased by 74% due to ramp-up of production and the need to build up initial water inventory. As we better understand our operational water efficiency, we will continue to explore opportunities to reduce water use. Thresholds: About the same(0%-5%), Low/High (6%-10%), Much low/Much high (>11%). Data reported is sourced from direct measurements. Total water withdrawal is the removal or purchase of water from any source, permanently or temporarily. Fresh and non-fresh water included. Total water return is water leaving organization's boundary and released to surface water, groundwater or to third parties. Fresh water is characterized by a low TDS content for which limits are defined by regulation in the jurisdiction. Water consumption is the total water withdrawn minus water returned and reflects quantity of water used and not returned to its proximate source or no longer available in its original form. Suncor has developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production. To advance Suncor's goal to continue improving environmental performance, Suncor uses a Sustainability Planning Forecast that estimates performance metrics over a 10 yr outlook.

W5.1a

(W5.1a) 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 2020 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?

<Not Applicable>

Water withdrawals – quality

% verified

Not verified

What standard and methodology was used?

<Not Applicable>

Water discharges – total volumes

% verified

Not verified

What standard and methodology was used?

<Not Applicable>

Water discharges – volume by destination

% verified

Not verified

What standard and methodology was used?

<Not Applicable>

Water discharges – volume by treatment method

% verified

Not verified

What standard and methodology was used?

<Not Applicable>

Water discharge quality – quality by standard effluent parameters

% verified

Not verified

What standard and methodology was used?

<Not Applicable>

Water discharge quality – temperature

% verified

Not verified

What standard and methodology was used?

<Not Applicable>

Water consumption – total volume

% verified

Not verified

What standard and methodology was used?

<Not Applicable>

Water recycled/reused

% verified

Not verified

What standard and methodology was used?

<Not Applicable>

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.

Row 1	Company-wide	Description of water-related performance standards for direct operations Company water targets and goals Commitments beyond regulatory compliance Commitment to water-related innovation Commitment to water stewardship and/or collective action Other, please specify (Incorporated within group environmental, sustainability or EHS policy)	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 behaviors 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. Suncor is committed to water stewardship and we are developing a robust framework that will more meaningfully focus our future efforts on water. Suncor has a publicly available Environment, Health and Safety policy statement: "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." 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." In addition, improvements in water efficiency allow 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 and allow us to go further than regulatory compliance. Suncor uses four principles to guide our integrated water management approach: 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.

Board-level committee	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. 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.
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W6.2b

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

Row 1	Scheduled - some meetings	Monitoring and performance Reviewing and guiding annual budgets Reviewing and guiding business plans Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding strategy Setting performance objectives	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 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. 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.
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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, which includes quarterly meetings and reports. 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 risks, 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.

W6.4

(W6.4) Do you provide incentives to C-suite employees or board members for the management of water-related issues?

Row 1	Yes	We incentivize water performance by progressing projects related to our water stewardship principles that focus on: •water conservation •reuse and recycle •return of treated wastewater to the watershed These are reflected in the business unit “growth” component of the AIP.
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W6.4a

(W6.4a) 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)?

Monetary reward	Chief Sustainability Officer (CSO) Other, please specify (Facility Managers, Business Unit Managers and Corporate Executive Team)	Other, please specify (Water related "growth" projects)	We incentivize water performance by progressing projects related to our water stewardship principles that focus on: •water conservation •reuse and recycle •return of treated wastewater to the watershed These are reflected in the business unit "growth" component of the AIP.
Non-monetary reward	Other, please specify (Facility Managers, Business Unit Managers and Corporate Executive Team)	Other, please specify (Water related "growth" projects)	The President's Operational Excellence Awards (POEAs) recognize and celebrate employees and contractors who demonstrate high-quality, innovative thinking at Suncor. 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.

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. Suncor is committed to water stewardship and we are developing a robust framework that will more meaningfully focus our future efforts on water. 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 (you may attach the report - this is optional)
2019-annual-mda-en.pdf

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?

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 fresh water withdrawal, water recycled/ reused, and wastewater production. 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: 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. 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.
Strategy for achieving long-term 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 to the long term business objectives. Our water management focus includes: 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. 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.
Financial planning	Yes, water-related issues are integrated	21-30	We have developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production. 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: 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. 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.

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?

Row 1	Yes	We used four scenarios defined by IHS Markit as the basis for the development of the Suncor corporate wide climate related scenarios. The IHS Markit 2DC, 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.
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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.

Row 1	Business level specific targets and/or goals Activity level specific targets and/or goals Site/facility specific targets and/or goals Basin specific targets and/or goals	None are monitored at corporate level	Suncor is committed to water stewardship and we are developing a robust framework that will more meaningfully focus our future efforts on water. 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) 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: • 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. 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. 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 2019-2020, 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). 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 2019 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. In Situ facilities targets and goals are also influenced by Alberta's Water Conservation and Allocation Policy and the Alberta Energy Regulator's Directive 081 during the design and operations of the facilities. The Policy and Directive require Suncor to continuously improve enhanced recovery methods and practices at our In Situ projects, while minimizing the use of high-quality non-saline water by recycling produced water efficiently and using alternative water sources where possible.
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W9. Verification

W9.1

(W9.1) Do you verify any other water information reported in your CDP disclosure (not already covered by W5.1a)?

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

W10. 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.

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 commitment to water stewardship and the expectation that it is developing a robust framework that will meaningfully focus its future effects on water; 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; statements regarding the anticipated outcomes and benefits from Suncor's ERM Program, OEMS and SIMP; 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 therefrom; Suncor's strategies, plans, policies, targets and focuses relating to water and sustainability, and the expected benefits therefrom; 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 second quarter of 2020 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.

W10.1

(W10.1) Provide details for the person that has signed off (approved) your CDP water response.

Row 1 Director in Sustainability Outreach and Disclosure at Suncor Energy

Environment/Sustainability manager

W10.2

(W10.2) 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

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

I am submitting my response

Investors

Public

Please confirm below

I have read and accept the applicable Terms