

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. Suncor’s long-life, low-decline asset base, strong balance sheet and integrated model, with our connection to end consumers through our retail network, sets us apart from our peers. These advantages are complemented by our long-standing approach to sustainability, operational excellence, capital discipline, technology and innovation. Suncor’s integrated operations include oil sands development and upgrading, offshore oil and gas production, petroleum refining, renewables and product marketing under the Petro-Canada™ brand. As Canada’s leading integrated energy company, we believe environmental and social progress and economic performance are intertwined and integral to our success.

The terms “Suncor” or “the company” in these responses are used herein for simplicity of communication and only mean that there is an affiliation with Suncor Energy Inc., without necessarily identifying the specific nature of the affiliation. The use of such terms in any response herein does not mean that they apply to Suncor Energy Inc. or any particular affiliate, and does not waive the corporate separateness of any affiliate. For further clarity, Suncor Energy Inc. does not directly operate or own assets in the United States.

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 2021	December 31 2021

W0.3

(W0.3) Select the countries/areas in which you operate.

- 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?

- Yes

W0.6a

(W0.6a) Please report the exclusions.

Exclusion	Please explain
Syncrude	Suncor assumed operatorship of the Syncrude Project on September 30, 2021. Suncor's equity interest of 58.74% does not change. As Suncor's operatorship of the Syncrude Project occurred at the end of the third quarter in 2021, Syncrude data is not integrated into Suncor's corporate-wide totals. Syncrude will be integrated into Suncor's corporate-wide totals and aligned with the required standards in future sustainability disclosure.

W0.7

(W0.7) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization.	Provide your unique identifier
Yes, an ISIN code	CA8672241079
Yes, a Ticker symbol	XTSE: SU
Yes, a CUSIP number	867224107

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 continue improving our environmental performance, Suncor uses a Sustainability Planning Forecast that estimates performance metrics over a 10 year outlook on a corporate and facility level.
Sufficient amounts of recycled, brackish and/or produced water available for use	Vital	Important	Approximately 93% of the water used by our mining and extraction operations (Base Plant and Fort Hills) in 2021 was recycled water. 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. In 2021, approximately 39% of the total water used was from recycled wastewater supplied from the Gold Bar Wastewater Treatment Plant, in Edmonton. 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 continue improving our 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.
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.
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.
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.
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	107790	Much lower	Our intake of fresh and non-fresh water for 2021 was 108 million cubic metres, 24% lower than 2020 performance. The water intake is used for refining products, with the balance mainly being consumed in oil and gas production. In 2021, we saw decreased annual precipitation rates in the Wood Buffalo region and increased water requirements for mining operations; increased withdrawal was due to in situ site ramp-up requirements and various site activities; no water use at Terra Nova due to suspended operations; relatively consistent Refining and Logistics operations. We continue to explore and implement local initiatives that will result in more efficient 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, which also includes industrial runoff from precipitation. Fresh and non-fresh water included. Data reported is sourced from direct measurements. Total withdrawal does not include produced/processed water in this case. 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	63235	Much lower	Our discharge of fresh and non-fresh water for 2021 was 63 million cubic metres, 18% lower than 2020 performance. In 2021, we saw decreased annual precipitation rates in the Wood Buffalo region and increased water requirements for mining operations; increased in situ site ramp-up requirements and various site activities, including MacKay River recycling/reusing more water than 2020; no water use at Terra Nova due to suspended operations; relatively consistent Refining and Logistics 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 return is water leaving organization's boundary and released to surface water, groundwater or 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. 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	44558	Much lower	Our consumption of fresh and non-fresh water for 2021 was 45 million cubic metres, 21% lower than 2020 performance. In 2021, we saw decreased annual precipitation rates in the Wood Buffalo region resulting in less industrial runoff being captured; Firebag saw a large decrease due to an increase in water release from operational requirements and capacity at site; no water use at Terra Nova due to suspended operations; relatively consistent Refining and Logistics operations. 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. 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. 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	57409	Much Lower	Suncor's operations include oil sands extraction and upgrading, 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 2021 upstream total water withdrawal volume was 29% lower than 2020 mainly due to decreased annual precipitation rates in the Wood Buffalo region caused sites to capture less industrial runoff. 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	19323	Much Lower	Suncor's operations include oil sands extraction and upgrading, 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 2021 upstream total water discharge volume is 38% lower than 2020. In 2021, we saw decreased annual precipitation rates in the Wood Buffalo region which caused sites to capture less industrial runoff; increased in situ site ramp-up requirements and various site activities, including MacKay River recycling/reusing more water than 2020. 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	38089	Much Lower	Suncor's operations include oil sands extraction and upgrading, 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 2021 upstream total water consumption volume was 24% lower than 2020. In 2021, we saw a decrease in withdrawal and discharge due to a decreased annual precipitation rates in the Wood Buffalo region leading to much lower consumption volumes. 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	50381	Lower	Suncor's operations include oil sands extraction and upgrading, 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 refineries located in Edmonton, Alta.; Sarnia, Ont.; Montreal, Que. and Commerce City, Colo. Downstream operations also includes our Burrard Terminal, St. Clair Ethanol Plant the Montreal Sulphur Plant. Suncor 2021 downstream total water withdrawal volume was 5% lower than 2020 due to relatively consistent downstream production, impacts from the pandemic and facility turnarounds. We continue to explore and implement local initiatives that will result in more efficient water use. 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	43912	Lower	Suncor's operations include oil sands extraction and upgrading, 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 refineries located in Edmonton, Alta.; Sarnia, Ont.; Montreal, Que. and Commerce City, Colo. Downstream operations also includes our Burrard Terminal, St. Clair Ethanol Plant the Montreal Sulphur Plant. Suncor 2021 downstream total water discharge volume was 5% lower than 2020 due to relatively consistent downstream production, impacts from the pandemic and facility turnarounds. We continue to explore and implement local initiatives that will result in more efficient water use. 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	6469	Lower	Suncor's operations include oil sands extraction and upgrading, 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 refineries located in Edmonton, Alta.; Sarnia, Ont.; Montreal, Que. and Commerce City, Colo. Downstream operations also includes our Burrard Terminal, St. Clair Ethanol Plant the Montreal Sulphur Plant. Suncor 2021 downstream total water discharge volume was 5% lower than 2020 due to relatively consistent downstream production, impacts from the pandemic and facility turnarounds. We continue to explore and implement local initiatives that will result in more efficient water use. 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	There are a variety of tools available to assess water stress and risk across our diverse assets, including IPIECAs Global Water Tool for Oil and Gas, the World Wildlife Funds Water Risk Filter Tool, and the World Resources Institutes Aqueduct Water Risk Atlas. Suncor has non-operated assets in the United Kingdom, North Africa, and the Middle East that are located in basins of high 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. Locally, regulators and governments also track water availability. For instance, the Alberta Energy Regulator provides public information showing water-short, potentially water-short and locally constrained areas in Alberta: High-resolution map None of Suncor's assets operate in areas of high risk of water stress (<40% ratio of withdrawals to supply). However, Suncor's Commerce City refinery in Colorado operates in a region that is classified as moderate risk (medium-high stress, 20-40% ratio of withdrawals to supply) according to the World Resources Institute's Aqueduct Water Risk Atlas. 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.

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	95557	Much lower	In 2021, Suncor's fresh water withdrawal volume was 22% lower than 2020 mainly due to decreased annual precipitation rates in the Wood Buffalo region which caused sites to capture less industrial runoff. 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 yr outlook on a corporate and facility level.
Brackish surface water/Seawater	Relevant	0	About the same	In 2021, Suncor's non-fresh water withdrawal volume was the same as 2020 due to no water use at Terra Nova. Production at Terra Nova has been shut in since the fourth quarter of 2019. 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 yr 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	5490	Much higher	In 2020, Suncor's groundwater withdrawal volume was 24% higher than 2020 due to an increase in groundwater withdrawal at Fort Hills; and decreased annual precipitation rates in the Wood Buffalo region which was compensated with more groundwater being withdrawn. 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 yr outlook on a corporate and facility level.
Produced/Entrained water	Relevant	38920	Much higher	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 2021, Suncor upstream in situ sites (Firebag and MacKay River) production increased compared to 2020 performance which resulted in a 18% increase in produced water. Produced water recycling rate was 97.8% at our Firebag in-situ operations and 99.6% at our MacKay River in-situ operations. At Terra Nova, produced water was zero as the asset remained offline in 2021. 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 yr outlook.
Third party sources	Relevant	6743	Higher	In 2021, Suncor's water withdrawal volume from third party sources was 6% higher than 2020 performance mainly due to downstream sites purchasing more water from third parties in the downstream. 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 yr 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	59834	Much lower	In 2021, Suncor's total fresh surface water discharges decreased by 21%. We saw decreased annual precipitation rates in the Wood Buffalo region which caused sites to capture less industrial runoff. 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	515	Lower	In 2021, Suncor's total non-fresh water discharges were 6% lower compared to 2020 performance due to decreased brackish water requirements at our downstream operations (Burrard Terminal) and no water use at Terra Nova. Production at Terra Nova has been shut in since the fourth quarter of 2019. 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	1226	Much higher	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 2021, Suncor's water discharge volume from third party sources was 31% higher than 2020, due to increased 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 yr outlook on a corporate and facility level.

W1.2j

(W1.2j) Within your direct operations, indicate the highest level(s) to which you treat your discharge.

	Relevance of treatment level to discharge	Volume (megaliters/year)	Comparison of treated volume with previous reporting year	% of your sites/facilities/operations this volume applies to	Please explain
Tertiary treatment	Relevant	3768	Lower	1-10	Suncor has monitored all water treatment activities for years, compared to 2020 the amount of water sent for tertiary treatment was 7% lower in 2021. Tertiary treatment involves the additional treatment needed to remove suspended, colloidal and dissolved constituents (nutrients, heavy metals, inorganic and other contaminants) remaining after secondary treatment through a number of processes including granular media filtration, biological nitrification denitrification, biological phosphorus removal, chlorination, etc. Tertiary treatment follows secondary treatment, further treatment and filtration. Our Sarnia Refinery uses Granular Activated Carbon (GAC) filters, the GAC help to remove the remaining trace of toxicity from the water. Our Commerce City Refinery uses Ultrafiltration (UF), the UF helps to remove the final traces of solids, including arsenic and mercury to meet our regulatory requirements. Commerce City will be using additional tertiary treatment in the future. 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 yr outlook on a corporate and facility level.
Secondary treatment	Relevant	5787	Lower	1-10	Suncor has monitored all water treatment activities for years, compared to 2020 the amount of water sent to secondary treatment was 5% lower in 2021. Secondary treatment involves the degradation of organic matter and reduction of solids through biological treatment. The removal of nutrients (nitrogen and/or phosphorus) can also be achieved at this level of treatment using a combination of chemical and biological treatments. Secondary treatment follows primary treatment. Suncor uses micro bio systems for secondary treatment. Our Montreal, Sarnia and Commerce City Refineries and Burrard Terminal uses secondary treatment systems such as activated sludge, Moving Bed Bio Reactor (MBBR) and Membranes bio reactor (MBR). These technologies help to remove some of the oil and grease, nitrates, phosphates, phenols and toxicity from the water. 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 yr outlook on a corporate and facility level.
Primary treatment only	Relevant	58744	Much lower	81-90	Suncor has monitored all water treatment activities for years, compared to 2020 the amount of water sent to primary treatment was 11% lower in 2021. Primary treatment involves the physical removal of suspended solids and floating material, typically by sedimentation. A preliminary treatment may often be applied involving the physical removal of large debris, large particles, oils, and grease, typically through screens and grit chambers. Suncor's only primary treatment is settling ponds, water is diverted to pond to allow settling of particles and testing prior discharge. This is mainly used for uncontaminated surface runoff water (rainfall, snowmelt etc.). This method of treatment is applicable for numerous Suncor sites. 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 yr outlook on a corporate and facility level.
Discharge to the natural environment without treatment	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	Wastewater discharge sent for deep-well disposal at Suncor's in situ site (Firebag) and Edmonton Refinery is classified as waste and is reported accordingly.
Discharge to a third party without treatment	Relevant	810	Much lower	1-10	Suncor has monitored all water treatment activities for years, compared to 2020 the amount of water sent to third parties was 26% lower in 2021. Discharge to a third party without treatment is domestic waste to city. There are a few Suncor sites where domestic sewage is sent to city sewer systems just like homes, and office building. 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 yr outlook on a corporate and facility level.
Other	Relevant	370	Much higher	Less than 1%	Suncor has monitored all water treatment activities for years, compared to 2020 the amount of water sent to primary treatment was significantly higher in 2021. Firebag and MacKay River in situ sites use recycled wastewater from our oil sands upgrading and utilities operations, surface run-off water collected within the facility boundary and from groundwater wells. As a result, most of the water used at the site is recycled. In addition, Base Plant also sent water to other sites for treatment and reuse. 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 yr outlook on a corporate and facility level.

W1.3

(W1.3) Provide a figure for your organization's total water withdrawal efficiency.

	Revenue	Total water withdrawal volume (megaliters)	Total water withdrawal efficiency	Anticipated forward trend
Row 1	4113300000	107790	381603.117172279	We continue to operate well below our annual water licences, withdrawing less water than we're regulated to withdraw. We continue to explore and implement local initiatives that will result in more efficient water use, with less fresh water drawn from local water sources. Suncor has developed models and tools used to anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production.

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)

0.25

Numerator: water aspect

Total water withdrawals

Denominator

Barrel of oil equivalent

Comparison with previous reporting year

Much lower

Please explain

In 2021, Suncor upstream total upstream water withdrawal intensity is 31% lower than 2020 mainly due to a decreased annual precipitation rates in the Wood Buffalo region, and increased reduced water requirements for mining operations and production ramp up at in situ sites. 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. Data reported is sourced from direct measurements. This metric is used to monitor our water use and success of process optimization strategies (ie. recycling, reuse, return strategies).

Business division

Upstream

Water intensity value (m3)

0.17

Numerator: water aspect

Total water consumption

Denominator

Barrel of oil equivalent

Comparison with previous reporting year

Much lower

Please explain

In 2021, Suncor upstream total water consumption intensity was 23% lower than 2020 mainly due to a decreased annual precipitation rates in the Wood Buffalo region, reduced water requirements for mining operations and production ramp up at in situ sites. 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. Fresh and non-fresh water included. Data reported is sourced from direct measurements. This metric is used to monitor our water use and success of process optimization strategies (ie. recycling, reuse, return strategies).

Business division

Midstream/Downstream

Water intensity value (m3)

0.29

Numerator: water aspect

Total water withdrawals

Denominator

Barrel of oil equivalent

Comparison with previous reporting year

About the same

Please explain

In 2021, Suncor's downstream total water withdrawal intensity was about the same (3% lower) as in than 2020. Water withdrawal and production stayed about the same year over year. 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. Data reported is sourced from direct measurements. This metric is used to monitor our water use and success of process optimization strategies (ie. recycling, reuse, return strategies).

Business division

Midstream/Downstream

Water intensity value (m3)

0.04

Numerator: water aspect

Total water consumption

Denominator

Barrel of oil equivalent

Comparison with previous reporting year

Much higher

Please explain

In 2021, Suncor's downstream total water consumption intensity was 33% higher than 2020 performance mainly due low precipitation in Edmonton and Montreal; site activities and turnarounds increasing water needs; and consistent production compared to last year. 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. Fresh and non-fresh water included. Data reported is sourced from direct measurements. This metric is used to monitor our water use and success of process optimization strategies (ie. recycling, reuse, return strategies).

W1.4

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

Yes, our suppliers

W1.4a

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

Row 1

% of suppliers by number

76-100

% of total procurement spend

26-50

Rationale for this coverage

We continue to partner with suppliers who share our values and align with our strategic objectives: seeking opportunities to reduce environmental impacts, supporting the communities where we work and live, and collectively contributing to economic growth. We engage with our suppliers on their sustainability performance by assessing sustainability performance as part of prequalification, awarding of work and ongoing supplier performance, gathering data to understand the effects of our supply chain, which helps us make more informed decisions, evaluating sustainability risks and opportunities in our supply chain and building relationships with like-minded suppliers to accelerate innovation and sustainability performance. Suncor's supplier risk identification process begins with a pre-screening 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 and sustainability. Suncor has a Sustainability Supplemental which is used in the qualification and selection process. This supplemental is weighted at 15% of our overall qualification and includes questions related to: 1. Indigenous business 2. Greenhouse gases and climate change 3. Community investment 4. Inclusion & diversity 5. Human Rights & Business Ethics 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. These discussions also contribute to a different way of assessing our suppliers' service offerings. Suncor remains committed in working with and advancing business with suppliers, and will endeavor to make the right business and social decisions at every opportunity.

Impact of the engagement and measures of success

In 2021, 4,396 suppliers (which accounts for 90% of Suncor's suppliers) have subscribed to Suncor's prequalification program. We continue to engage with our key suppliers and industry partners to accelerate innovation and sustainability performance. Suncor and our key suppliers share best practices to achieve continuous improvement in sustainability performance throughout the value chain.

Comment

In 2018 Supply Chain Management (SCM) Sustainability formalized a SCM Sustainability Strategy. 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 objectives, including our Journey of Reconciliation and GHG objectives and target.

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. We also work with suppliers to understand their water stewardship and water related goals.)

% of suppliers by number

76-100

% of total procurement spend

26-50

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. Suncor's supplier risk identification process begins with a pre-screening 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 and sustainability. Suncor has a Sustainability Supplemental which is used in the qualification and selection process. This supplemental is weighted at 15% of our overall qualification. In 2021, 4,396 suppliers (which accounts for 90% of Suncor's suppliers) have subscribed to Suncor's prequalification program.

Impact of the engagement and measures of success

We continue to engage with our key suppliers and industry partners to accelerate innovation and sustainability performance. Suncor and our key suppliers share best practices to achieve continuous improvement in sustainability performance throughout the value chain. These discussions also contribute to a different way of assessing our suppliers' service offerings. Internally, there is increased awareness regarding opportunities to improve our social and environmental outcomes across the company.

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

2

Total value of fines

49550

% of total facilities/operations associated

9

Number of fines compared to previous reporting year

About the same

Comment

Suncor paid the following two Administrative Monetary Penalties (AMPs) in 2021 associated with two unauthorized discharges in the Terra Nova Field in 2018 and 2020: 1. March 2021 - AMP for \$40,000 paid to the C-NLOPB associated with an authorized discharge of Synthetic Based Mud (SBM) in April 2018 from the Transocean Barents MODU (Mobile Offshore Drilling Unit) that was operating in the Terra Nova Field for Suncor. 2. December 2021 - AMP for \$9,550 paid to Transport Canada associated with a sheen observed from the Terra Nova FPSO following disconnect from the Terra Nova Field in June 2020. Both investigations are complete as the AMPs were paid.

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.

Value chain stage

Direct operations

Coverage

Full

Risk assessment procedure

Water risks are assessed as part of an established enterprise risk management framework

Frequency of assessment

Annually

How far into the future are risks considered?

More than 6 years

Type of tools and methods used

Enterprise risk management

International methodologies and standards

Tools and methods used

Enterprise Risk Management

ISO 31000 Risk Management Standard

Environmental Impact Assessment

Contextual issues considered

Water availability at a basin/catchment level

Water quality at a basin/catchment level

Stakeholder conflicts concerning water resources at a basin/catchment level

Implications of water on your key commodities/raw materials

Water regulatory frameworks

Status of ecosystems and habitats

Access to fully-functioning, safely managed WASH services for all employees

Stakeholders considered

Customers

Employees

Investors

Local communities

NGOs

Regulators

Suppliers

Water utilities at a local level

Other water users at the basin/catchment level

Comment

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, employees, investors, local communities, and other stakeholders are informed of water-related risks through the annual Report on Sustainability and various third-party Environmental, Social and Governance (ESG) disclosure platforms. 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. 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. Indigenous communities have been identified as key stakeholders and included in Suncor's overall water risk assessment. Beyond commitments outlined in our policies, we also have agreements with Indigenous communities near our operations, including the Regional Municipality of Wood Buffalo in Alberta and Sarnia, Ontario. These agreements reflect how we work together on a range of matters from project consultation to realizing the benefits of commercial and business opportunities, as well as supporting skills, employment and training programs.

W3.3b

(W3.3b) 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 then entered into a third party tool called Enablon which then 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, Suncor has created an integrated Policy and Regulatory Issues Management (PRIM) process which drives a disciplined approach to manage direct and indirect activities to influence policies and ensure they are consistent with our water policy and water commitments. PRIM 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. Under PRIM, Suncor has a Water Network to identify and manage water-related issues and meets regularly as water-related policies, regulations and issues emerge. PRIM 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. In 2020 Supply Chain Management added a sustainability risk to the enterprise risk register. Suncor defined the sustainability risk related to Supply Chain and identified all controls and solutions in place to mitigate the risk.

W4. Risks and opportunities

W4.1

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

Yes, only within our direct operations

W4.1a

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

Suncor uses an enterprise-wide risk management system (ERM) to assess and define risk. Like most ERM systems it uses a matrix that determines the consequence of a risk and the likelihood of it occurring. There are six (6) consequence and likelihood categories. The ERM assign risks a ranking from I to IV for economic, environmental and social. Social is further broken down into health & safety, reputation and regulatory with guidance. Suncor defines substantive risks that are risked rank at II or I; to define substantive change for the purpose of this assessment; an economic value of \$10M was used. This includes direct financial costs and lost opportunity value (LOV). 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: • Sarnia Refinery • Montreal Refinery • Montreal Sulphur Plant • St. Clair 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 offshore operation; situated off the east coast of Canada, we operate the Terra Nova Floating Production Storage and Offloading vessel. Production at Terra Nova has been shut in since the fourth quarter of 2019 but is expected to return to operations by the end of 2022.

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.

Country/Area & River basin

Canada	Fraser River
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Number of facilities exposed to water risk

1

% company-wide facilities this represents

Less than 1%

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

Less than 1%

% company's total global revenue that could be affected

Less than 1%

Comment

Suncor's Burrard Terminal is located in Port Moody, British Columbia. This facility is included in our Refining & Logistics operations.

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

In order to achieve mine closure and progress reclamation opportunities, a process for the safe release of treated water back to the environment is required to accomplish timely mine closure (operational total fluids containment and long-term closure water quality). We require both federal regulations and provincial regulatory approval to release treated oil sands mine water to the environment within a certain timeframe. Indigenous communities and stakeholders have increased sensitivity about water release, concerns over water quality and quantity, health impacts, and impacts to local biodiversity. 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

4-6 years

Magnitude of potential impact

High

Likelihood

Likely

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)

1000000000

Potential financial impact figure - maximum (currency)

2000000000

Explanation of financial impact

If there is no water release policy and regulatory framework in place we are unable to treat and release oil sands mine water by our containment pinch-point which would require: \$2B-\$1B in investment in other water management projects, such as construction a water treatment plant, sub-surface injection options or building additional containment/water storage. This would also extend the timeframe for reclamation and impact extraction efficiencies resulting in additional costs.

Primary response to risk

Other, please specify (Engage with regulators/policymakers, local communities, NGOs and the general public, improve monitoring and increase investment in new technologies and management alternatives.)

Description of response

Work with provincial and federal government and other stakeholders 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. COSIA members have invested \$592 million in 273 contributed water technologies since 2012. In 2020, 86 active projects were underway through COSIA at a cost of \$319 million. As a result of this work, these projects have reduced freshwater use intensity at in situ operations by 44% and reduced net water use intensity from the Athabasca River at mining operations by 22% – all since 2012 and we continue to work on these numbers.

Cost of response

400000000

Explanation of cost of response

The estimated cost for the containment strategy is ~\$400 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

Acute physical	Other, please specify (Increased water stress)
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Primary potential impact

Increased operating costs

Company-specific description

According to the definition provided of water-stressed areas none of Suncor's assets operate in areas of high risk of water stress (<40% ratio of withdrawals to supply). However, Suncor's Commerce City refinery in Colorado operates in a region that is classified as moderate risk (medium-high stress, 20-40% ratio of withdrawals to supply) according to the World Resources Institute's Aqueduct Water Risk Atlas. The World Wildlife Fund's Water Risk Filter Tool and the World Resources Institute's Aqueduct Water Risk Atlas are tools Suncor uses to evaluate overall physical, regulatory and reputational risks at the watershed level. Both indicate that our Commerce City refinery in Colorado exists within a "medium-high" water stress region of the Mississippi River Basin. 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.

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 and 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, which became 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.

Country/Area & River basin

Canada	Other, please specify (All basins where we operate)
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Type of risk & Primary risk driver

Regulatory	Increased difficulty in obtaining withdrawals/operations permit
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Primary potential impact

Constraint to growth

Company-specific description

Increasing expectations from stakeholders on water management, operational requirements and performance may lead to the development or revision of provincial and federal water policy and regulation which may add additional restrictions and requirements for Suncor resulting in reputational and regulatory impacts. There is growing awareness about the need for responsible industrial water management and concerns with potential effects on local watersheds (water quality and quantity). Locally, communities are becoming concerned with the cumulative impacts of large industrial operations on local watersheds, local drinking water quality and overall preservation of the aquatic ecosystems. More specifically, water is an important human right and an important element of Traditional Land Use expectations for Indigenous communities. Federal and provincial water quality/quantity policies and regulations are regularly reviewed and are increasing in rigour.

Timeframe

Current up to one year

Magnitude of potential impact

Medium

Likelihood

More likely than not

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

N/A

Primary response to risk

Engage with regulators/policymakers

Description of response

Engage with regulators/policymakers, local communities and other stakeholders on the development of water related policies and regulations.

Cost of response

W4.2c

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

	Primary reason	Please explain
Row 1	Evaluation in progress	We engage with our suppliers on their sustainability performance by assessing sustainability performance as part of prequalification and gathering data to understand the effects of our supply chain, which helps us make more informed decisions, evaluating sustainability risks and opportunities in our supply chain and building relationships with like-minded suppliers to accelerate innovation and sustainability performance. In 2020 Supply Chain Management added a sustainability risk to the enterprise risk register. Suncor defined the sustainability risk related to Supply Chain and identified all controls and solutions in place to mitigate the risk. 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). Convened under COSIA, Suncor and the WTDC partners, Canadian Natural, Cenovus Energy Inc. (through its subsidiary Husky Oil Operations Ltd.) and CNOOC International developed the \$140 million Water Technology Development Centre, a first-of- its-kind demonstration site for oil sands project partner companies to test water treatment technologies at a commercial scale.

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, COSIA members have invested \$592 million in 273 contributed water technologies since 2012. In 2020, 86 active projects were underway through COSIA at a cost of \$319 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)

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)

35728

Comparison of total withdrawals with previous reporting year

Much lower

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

34864

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

865

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

15290

Comparison of total discharges with previous reporting year

Much lower

Discharges to fresh surface water

14847

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

443

Total water consumption at this facility (megaliters/year)

20439

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 2021, Base Plant total water consumption was 33% lower than 2020. Water withdrawal decreased by 40% due to less precipitation (low industrial run-off). Water discharges decreased by 47% due to less precipitation and an increase in internal water transfers (to other Suncor Facilities). 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)

2710

Comparison of total withdrawals with previous reporting year

Much higher

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

1560

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

730

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

420

Total water discharges at this facility (megaliters/year)

3020

Comparison of total discharges with previous reporting year

Much higher

Discharges to fresh surface water

1350

Discharges to brackish surface water/seawater

0

Discharges to groundwater

1660

Discharges to third party destinations

10

Total water consumption at this facility (megaliters/year)

-310

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 2021, Firebag total water consumption was about the same (-3%) as 2020. Water withdrawal increased by 50% and water discharges increased by 260% due to more precipitation and increased site requirements for production ramp up. 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)

395

Comparison of total withdrawals with previous reporting year

Much higher

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

70

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

325

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

10

Comparison of total discharges with previous reporting year

Much lower

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)

385

Comparison of total consumption with previous reporting year

About the same

Please explain

Suncor's oil sands in situ operations are located near Fort McMurray in Alberta. In 2021, MR total water consumption was 13% higher than 2020. Water withdrawal was 11% higher due to an increase in production and steady operations following the extended outage in 2020. 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)

5243

Comparison of total withdrawals with previous reporting year

About the same

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

5114

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

129

Total water discharges at this facility (megaliters/year)

4183

Comparison of total discharges with previous reporting year

Lower

Discharges to fresh surface water

4054

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

129

Total water consumption at this facility (megaliters/year)

1059

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 2021, Montreal refinery total water consumption was 14% higher than 2020, explained by low precipitation. Water withdrawal decreased by 23% and the discharge decreased by 6% due to less river water intake (5% decrease in production) and lower precipitation leading to lower industrial run-off and less water being returned. 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)

35745

Comparison of total withdrawals with previous reporting year

Much lower

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

34734

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

5

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

1007

Total water discharges at this facility (megaliters/year)

35745

Comparison of total discharges with previous reporting year

Lower

Discharges to fresh surface water

35745

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

Much lower

Please explain

Suncor operates refineries in Alberta, Ontario and Quebec, Canada, and in Colorado, USA. In 2021, Sarnia refinery did not account for any water consumption, and we are working to improve water accounting. Water withdrawal decreased by 8% due to colder weather which caused less cooling water needed for site operations. This also led to decreased water discharges by 5%. 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)

950

Comparison of total withdrawals with previous reporting year

Higher

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

950

Total water discharges at this facility (megaliters/year)

89

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

89

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)

861

Comparison of total consumption with previous reporting year

Higher

Please explain

Suncor operates Canada's largest ethanol facility — the St. Clair Ethanol Plant in the Sarnia-Lambton region of Ontario. In 2021, St. Clair ethanol plant experienced a total water consumption increase of 7%, water withdrawal increased by 7% and discharge increased by 5% due to a slight increase in 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 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)

4233

Comparison of total withdrawals with previous reporting year

Higher

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

2533

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

1699

Total water discharges at this facility (megaliters/year)

1048

Comparison of total discharges with previous reporting year

Lower

Discharges to fresh surface water

809

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

239

Total water consumption at this facility (megaliters/year)

3185

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 2021, Edmonton refinery total water consumption increased by 13% compared to 2020. Water withdrawal increased by 7% due to less precipitation and from hydrotests of onsite tanks. Water discharges decreased by 8% due to extended periods of no discharge, this water was sent to disposal well due to contamination. 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)

0

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

0

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)

0

Comparison of total consumption with previous reporting year

About the same

Please explain

Suncor Energy operates Terra Nova located offshore approximately 350 kilometres southeast of Newfoundland and Labrador. Production at Terra Nova has been shut in since the fourth quarter of 2019, therefore no water use in 2021. 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)

3300

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

950

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

2290

Total water discharges at this facility (megaliters/year)

2060

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

2060

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)

1240

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 2021, Commerce City refinery had a 22% reduction in overall production due to a turnaround. The water values were able to stay about the same (withdrawal decreasing 1%, discharge increasing 4% and consumption increasing 4%) due to an increase in water demand during the first few weeks and then a reduction in demand following. 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)

171

Comparison of total withdrawals with previous reporting year

About the same

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

147

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

24

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)

171

Comparison of total consumption with previous reporting year

About the same

Please explain

Suncor operates its Montreal Sulphur Plant in Quebec, Canada. In 2021, the Sulphur plant total water consumption and water withdrawal was about the same at a 4% decrease compared to 2020. This was due to also relatively consistent production and precipitation. 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)

18575

Comparison of total withdrawals with previous reporting year

About the same

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

15960

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

2615

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

1003

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

880

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

123

Total water consumption at this facility (megaliters/year)

17575

Comparison of total consumption with previous reporting year

About the same

Please explain

Suncor's oil sands mining operations are located near Fort McMurray in Alberta. In 2021, FH water consumption (decrease of 1%), discharge (increase of 2%) and withdrawal (decrease of 1%) was about the same compared to 2020. This was due to consistent production, plant requirements, and precipitation. 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.

Facility reference number

Facility 12

Facility name (optional)

Burrard Terminal

Country/Area & River basin

Canada

Fraser River

Latitude

49.283

Longitude

-122.85

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)

740

Comparison of total withdrawals with previous reporting year

About the same

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

515

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

225

Total water discharges at this facility (megaliters/year)

786

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

515

Discharges to groundwater

0

Discharges to third party destinations

271

Total water consumption at this facility (megaliters/year)

-47

Comparison of total consumption with previous reporting year

Much lower

Please explain

Suncor's Burrard Terminal is located in Port Moody, BC. In 2021, Burrard water withdrawal and discharge stayed about the same. 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 third party verified?

Water withdrawals – total volumes

% verified

76-100

Verification standard used

This data is assured by Ernst & Young LLP as part of the publication of Suncor's sustainability disclosure. Their limited assurance procedures were planned and performed in accordance with the Canadian Standard for Assurance Engagements ('CSAE') 3000, Attestation Engagements Other Than Audits or Reviews of Historical Financial Information ('CSAE 3000'), and Canadian Standard on Assurance Engagements on Greenhouse Gas Statements ('CSAE 3410'). The assurance statement can be found on suncor.com. In addition, 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.

Please explain

<Not Applicable>

Water withdrawals – volume by source

% verified

Not verified

Verification standard used

<Not Applicable>

Please explain

Water withdrawals – quality by standard water quality parameters

% verified

Not verified

Verification standard used

<Not Applicable>

Please explain

Water discharges – total volumes

% verified

Not verified

Verification standard used

<Not Applicable>

Please explain

Water discharges – volume by destination

% verified

Not verified

Verification standard used

<Not Applicable>

Please explain

Water discharges – volume by final treatment level

% verified

Not verified

Verification standard used

<Not Applicable>

Please explain

Water discharges – quality by standard water quality parameters

% verified

Not verified

Verification standard used

<Not Applicable>

Please explain

Water consumption – total volume

% verified

Not verified

Verification standard used

<Not Applicable>

Please explain

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	Company-wide	Description of water-related performance standards for direct operations	Our Environmental Health and Safety Policy states our belief that a resilient environment and vibrant communities are foundational to business success and our aim to minimize our impact on water. We believe water is a shared and precious resource. It must be managed wisely using a balanced, integrated and sustainable approach. Water is an essential part of Suncor's operations, so it's important we find ways to continuously improve our water use efficiency (including limiting water withdrawals and maximizing optimizing recycling) and safely release water across our business units. Recognizing our role in managing water responsibly, our water strategy principles focus on: 1. Shared value of water: Understanding that water is a valuable natural resource that holds environmental, social, cultural and economic value. 2. Watershed management: Understanding our water use in the context of the watershed where we operate, taking into consideration all values, stakeholders, and users in the watershed. 3. Reduce-Reuse-Release: A truly sustainable integrated water management approach must simultaneously balance water reduce-reuse and release considerations. 4. Integrated options analysis: Ensuring we balance the trade-offs inherent in managing water and understanding water as one aspect of an interconnected ecosystem. Aligned with our purpose, our culture of operational discipline and continuous improvement guides how we manage our water use, reduce our impacts, and protect the environment. Suncor is committed to water stewardship in the areas where we operate and we continue to develop a framework that will allow us to more align with our strategic objectives and meaningfully focus our future water management efforts on those specific to each asset and the watersheds within which they operate.
1		Commitment to align with public policy initiatives, such as the SDGs	Environment-Health-and-Safety-Policy-en.pdf
		Commitments beyond regulatory compliance	
		Commitment to water-related innovation	
		Commitment to stakeholder awareness and education	
		Commitment to water stewardship and/or collective action	
		Other, please specify (This is incorporated within Suncor's Report on Sustainability under Water Stewardship and Tailings Management.)	

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.
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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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W6.2d

(W6.2d) Does your organization have at least one board member with competence on water-related issues?

Row 1	Yes	ESG is embedded in director recruitment, board evaluation and committee representation. The board’s skills matrix was revised in 2021. One of the competencies and skills is in Environment Health and Safety (EHS), which is described as: significant experience in the areas of environment (including climate risk management), health and safety, including knowledge of industry regulations and a commitment to best practices for workplace safety. Ten board members have competence in EHS. Suncor’s board practices regarding performance evaluation and compensation consider ESG factors by: • evaluating senior executive performance annually against goals that support and reinforce our business objectives, including climate performance • considering our performance against enterprise-wide sustainability goals related to safety, environmental (including water), to determine the annual incentive payment amounts for the CEO and the rest of the executives.	<Not Applicable>	<Not Applicable>
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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

Assessing water-related risks and opportunities
 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	Yes		
1			We incentivize water performance by progressing projects related to our water stewardship principles that focus on: water conservation, reuse and recycle, and return of treated wastewater to the watershed. These are reflected in the business unit "strategic initiatives" component of the AIP.

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 "strategic initiatives" 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 "strategic initiatives" 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)	Suncor Excellence Awards 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?

Suncor has created an integrated policy and regulatory issues management (PRIM) process which drives a disciplined approach to manage direct and indirect activities to influence policies and ensure they are consistent with our water policy and water commitments. PRIM 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. This includes a number of subcommittees, councils, forums and networks to prioritize and steer the right work across the company, influencing many decisions and actions Suncor takes on a daily basis.

The Water Network meets regularly as water-related policies, regulations and issues emerge. It allows us to influence policy in a strategic/tactical manner. Our Environmental Health and Safety Policy states our belief that a resilient environment and vibrant communities are foundational to business success and our aim to minimize our impact 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-Release, 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)
- 2021-annual-report-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 believe water is a shared and precious resource. It must be managed wisely using a balanced, integrated and sustainable approach. Water is an essential part of Suncor's operations, so it's important we find ways to continuously improve our water use and safely release water from our operations. Recognizing our role in managing water responsibly, our water strategy principles focus on: Shared value of water; Watershed management; Reduce-Reuse-Release; Integrated options analysis. Water management is an integral part of our strategy. Suncor's strategy: To be Canada's leading energy company by growing our business in low GHG fuels, electricity, and hydrogen while sustaining and optimizing our existing hydrocarbon business and transforming our GHG footprint; all enabled by our expertise, long-life resources, integrated business model, strong connection to customers, and world-class environment, social and governance (ESG) performance including water targets. Our strategy is underpinned by 6 strategic objectives: Grow returns on capital; Be a net-zero by 2050; Optimize our base business; Expand low emissions business; Grow our customer connection; Achieve world-class ESG performance. For more information, please visit: https://www.suncor.com/en-ca/about-us/strategy
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	21-30	We believe water is a shared and precious resource. It must be managed wisely using a balanced, integrated and sustainable approach. Water is an essential part of Suncor's operations, so it's important we find ways to continuously improve our water use and safely release water from our operations. Recognizing our role in managing water responsibly, our water strategy principles focus on: Shared value of water; Watershed management; Reduce-Reuse-Release; Integrated options analysis. Water management is an integral part of our strategy. Suncor's strategy: To be Canada's leading energy company by growing our business in low GHG fuels, electricity, and hydrogen while sustaining and optimizing our existing hydrocarbon business and transforming our GHG footprint; all enabled by our expertise, long-life resources, integrated business model, strong connection to customers, and world-class environment, social and governance (ESG) performance including water targets. Our strategy is underpinned by 6 strategic objectives: Grow returns on capital; Be a net-zero by 2050; Optimize our base business; Expand low emissions business; Grow our customer connection; Achieve world-class ESG performance. For more information, please visit: https://www.suncor.com/en-ca/about-us/strategy
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 strategy principles focus on: Shared value of water; Watershed management; Reduce-Reuse-Release; Integrated options analysis. Water management is an integral part of our strategy. Supporting our strategy, our Operational Excellence 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 scenario analysis to inform its business strategy?

Row 1	Yes	We use three energy future scenarios to 2050 (substantially based on the IHS Markit Autonomy, Rivalry and Discord scenarios) and a 2°C scenario to 2100 to test and assess the resiliency of our business strategy against inherent uncertainty. 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) Provide details of the scenario analysis, what water-related outcomes were identified, and how they have influenced your organization's business strategy.

<p>Row 1 Water-related Land-use change Other, please specify (Reclamation and closure)</p>	<p>Climate Projections: The global climate projections used here are based on the Community Earth System Model (CESM), which is a leading GCM and one of the models that the 5th IPCC Assessment Report was based on. A small ensemble of 4 independent CESM simulations was employed. Regional climate modelling was conducted using the Weather Research and Forecasting (WRF) model at 30 km resolution over North America with a refined grid at 10 km resolution over western Canada. The WRF simulations have been conducted only for the three 15-year analysis periods, whereas CESM was run continuously from pre-industrial times to 2100. Furthermore, each CESM ensemble member was used to drive two separate WRF simulations, one with the G and one with the T configuration, resulting in 8 WRF simulations per period (24 in total). Hydrologic Model: The hydrologic model of the Athabasca River Basin is based on the HydroGeoSphere (HGS) integrated surface-subsurface hydrologic model, which simulates overland and streamflow across the surface as well as variably-saturated 3-dimensional subsurface flow of groundwater. The model has been specifically configured and calibrated for the ARB, employing an unstructured mesh (grid) with a resolution of 1 km – 5 km and refinement to 500 m along surface water features. The subsurface represents 13 geologic units in 22 numerical layers, ranging from the major Devonian groups at the bottom to peatlands and topsoil. The land surface is dominated by boreal forests and peatlands; the latter are particularly important, as peatlands facilitate shallow groundwater flow and can limit moisture loss to evapotranspiration (ET). The WRF data used to drive the ARB model include surface radiation balance, wind, temperature and humidity to estimate ET, as well as liquid precipitation and snowmelt as water input. Snow and snowmelt were computed by the land surface model in WRF, using an energy and mass balance approach. A limited-area, high-resolution version of the model has been constructed for the Alberta Oil Sands (AOS) region, which was used to simulate the impact of small number of selected extreme climate events. The AOS model has a resolution of approximately 0.5 km – 2.5 km, but requires upstream boundary input from the large-scale ARB model.</p>	<p>Hydrogeosphere Athabasca Watershed Model-Climate Change Scenarios. The HGS model is leading edge integrated groundwater-surface water model that allow downscaling of IPCC climate change scenarios as inputs into Watershed analysis. Design of mine reclamation/closure landscapes extend for many decades where climate conditions today create uncertainty if they were extended into the future.</p>	<p>Influence our reclamation and closure plans to develop and design long term sustainment of reclaimed landscapes (upland forest, wetlands and lakes). Understanding climate change impacts improves our ability manage risk/liability and improve confidence in closure outcomes.</p>
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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 uses an annual Planning Price Assumption (PPA) process, which summarizes Suncor's rationale for long-run pricing assumptions and is used in the business plan and all economic evaluations, including a price on water. Water management is an integral part of our strategy. Supporting our strategy, our Operational Excellence 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.

W7.5

(W7.5) Do you classify any of your current products and/or services as low water impact?

<p>Row 1 No, but we plan to address this within the next two years</p>	<p><Not Applicable></p>	<p>Other, please specify (Need to work on internal alignment of definition for low water impact and appropriate approach in our business)</p>	<p>There is no common definition of what constitutes a low water impact product and/or service, so we are working on defining the criteria and threshold used for classifying products and/or services as low water impact.</p>
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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	Aligned with our purpose, our culture of operational discipline and continuous improvement guides how we manage our water use, reduce our impacts, and protect the environment. Suncor is committed to water stewardship in the areas where we operate and we continue to develop a framework that will allow us to more align with our strategic objectives and meaningfully focus our future water management efforts on those specific to each asset and the watersheds within which they operate. 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. 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. This inventory is tracked through annual assessments and monitoring of bitumen production rates and fluid tailings treatment rates. 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", "estimates", "could", "anticipates", "intends", "may", "forecasts", "potential", "strategy", "goal", "objective", "outlook", "target" and similar expressions. Forward-looking statements in these responses include references to: Suncor's expectation that certain models developed by it will anticipate future trends in areas such as fresh water withdrawal, water recycled/ reused, and wastewater production; the expectation that continued monitoring of the watersheds will help us adapt and continue to take appropriate actions to reduce our water footprint; the expectation that continued exploration and implementation of local initiatives will result in more efficient water use; Suncor's expectation that Commerce City will be using additional tertiary treatment in the future; expectations regarding the impact of various water treatments including GAC filters, Ultrafiltration, Moving Bed Bid Reactor, Membranes bio reactor and settling ponds; Suncor's expectations regarding how it minimizes the adverse impacts of various potential water pollutants on water ecosystems on human health through various management procedures; the expectation that Terra Nova will return to operations by the end of 2022; the potential impacts, time frame, magnitude of potential impact, likelihood and potential financial impacts of the identified water risks (regulatory uncertainty, increased water stress, increased difficulty in obtaining withdrawals / operating permits) and the expected impact of Suncor's response thereto; Suncor's estimated timeframe and identified potential financial impact of the water related opportunities, including improved water efficiency in operations and collective action innovation; the expectation that maturing relationships with a diverse range of suppliers is important as Suncor looks to move our company and industry from supply arrangements that are transactional in nature to partnerships that are more strategic and to leverage our collective strengths to amplify innovation and drive sustainability performance; Suncor's water strategy, principles and aims; the manner in which water-related risks are integrated into Suncor's long-term strategic business plans; our strategic goal to be Canada's leading energy company by growing our business in low GHG fuels, electricity, and hydrogen while sustaining and optimizing our existing hydrocarbon business and transforming our GHG footprint; the belief in the 6 strategic objectives of the new strategy: to grow returns on capital; to be a net-zero by 2050; to optimize our base business; to expand low emissions business; to grow our customer connection; and to achieve world-class ESG performance; statements regarding Suncor's energy future scenarios and the belief that our work toward understanding and integrating water related scenario analysis in the corporate climate related scenario analysis will help inform business strategy; and statements regarding COSIA's two Water Performance Goals and Suncor's plan to contribute to these targets.

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 2022 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	Arlene Strom, Chief Sustainability Officer and General Counsel	Chief Sustainability Officer (CSO)
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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

SW. Supply chain module

SW0.1

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

Row 1	41133000000
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SW1.1

(SW1.1) Could any of your facilities reported in W5.1 have an impact on a requesting CDP supply chain member?

We do not have this data and have no intentions to collect it

SW1.2

(SW1.2) Are you able to provide geolocation data for your facilities?

Row 1	Yes, for all facilities	All geolocation data for our facilities is already disclosed in section W5.1
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SW1.2a

(SW1.2a) Please provide all available geolocation data for your facilities.

SW2.1

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

Requesting member

NRG Energy Inc

Category of project

Other

Type of project

Other, please specify (All options)

Motivation

We believe water is a shared and precious resource that must be managed wisely. As water is an essential part of our operations, it's important we find innovative ways to manage water effectively and efficiently across our business and with our customers.

Estimated timeframe for achieving project

Other, please specify (Current and future projects)

Details of project

Responsible water use is critical to the company, to neighbouring communities and to our stakeholders. We work towards minimizing the withdrawal of fresh water from the watersheds where we operate; reusing, recycling and identifying opportunities to safely release water where possible; and safely storing water on our sites. This requires technological advancement and significant collaboration. Companies are encouraged to reach out to us directly with technology or collaboration proposals.

Projected outcome

SW2.2

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

No

SW3.1

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

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

Please select your submission options

Yes

Public

Please confirm below

I have read and accept the applicable Terms