DTE Energy Company - Water Security 2019

W0. Introduction

W0.1

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

DTE Energy (NYSE: DTE) is a diversified U.S. energy company with approximately $14.2 billion in revenue for 2018. Our largest operating subsidiaries are DTE Electric Co., an electric utility, and DTE Gas Co., a natural gas utility.   DTE Electric is a Michigan corporation organized in 1903 and is a public utility subject to regulation by the Michigan Public Service Commission (MPSC) and the Federal Energy Regulatory Commission (FERC).   DTE Electric is engaged in the generation, purchase, distribution and sale of electricity to approximately 2.2 million customers in southeast Michigan.   DTE Gas is a Michigan corporation organized in 1898 and is a public utility subject to regulation by the MPSC. DTE Gas is engaged in the purchase, storage, transmission, gathering, distribution and sale of natural gas to approximately 1.3 million customers throughout Michigan and the sale of storage and transportation capacity. Our other businesses are involved in 1) natural gas pipelines, gathering and storage; 2) power and industrial projects; and 3) energy marketing and trading operations.   More information on DTE Energy, including our Corporate Citizenship Report, can be found at: DTEenergy.com.

W-EU0.1a

(W-EU0.1a) Which activities in the electric utilities sector does your organization engage in?

Electricity generation
Distribution

W-EU0.1b

(W-EU0.1b) For your electricity generation activities, provide details of your nameplate capacity and the generation for each power source.

	Nameplate capacity (MW)	% of total nameplate capacity	Gross generation (MWh)
Coal – hard	6153	49.28	28440814
Lignite	0	0	0
Oil	325	2.6	88511
Gas	2957	23.68	2876595
Biomass	321	2.57	487886
Waste (non-biomass)	0	0	0
Nuclear	1161	9.3	7358490
Geothermal	0	0	0
Hydroelectric	1054	8.44	20934
Wind	451	3.61	2790885
Solar	65	0.52	96571
Other renewable	0	0	0
Other non-renewable	0	0	0
Total	12487	100	42160686

W0.2

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

	Start date	End date
Reporting year	January 1 2018	December 31 2018

W0.3

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

United States of America

W0.4

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

USD

W0.5

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

Companies, entities or groups in which an equity share is held

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
Electric Distribution Operations	DTE Energy is focusing on the company's largest sources of water withdrawal and use; namely, our steam electric power generating stations and company headquarters. These generating stations operate under the authority of National Pollutant Discharge Elimination System (NPDES) permits, and local sanitary sewer permits, where applicable to industrial wastewater. The company does not track all types of water inputs and outputs for its electric distribution centers or electric transmission facilities. In addition, the company does not report water discharged from its electrical manholes and vaults. The water use at these types of facilities is significantly less than that of the steam electric power generating stations. Geographically, DTE is only reporting on Michigan operations.
Gas Distribution, Transmission, and Storage Operations	DTE Energy is focusing on the company's largest sources of water withdrawal and use; namely, our steam electric power generating stations and company headquarters. These generating stations operate under the authority of NPDES permits, and local sanitary sewer permits, where applicable to industrial wastewater. The company does not track all types of water inputs and outputs for its gas distribution, transmission and storage operations. The water use at these types of facilities is significantly less than that of the steam electric power generating stations. The one exception to this exclusion is Taggart Compressor Station. This facility holds a NPDES Permit and therefore is included in the disclosure. Geographically, DTE is only reporting on Michigan operations.
Service Centers, Call Centers and Office Buildings	DTE Energy is focusing on the company's largest sources of water withdrawal and use; namely, our steam electric power generating stations and company headquarters. These generating stations operate under the authority of NPDES permits, and local sanitary sewer permits, where applicable to industrial wastewater. The company does not track all types of water inputs and outputs for its service centers, call centers and office buildings. The water use at these types of facilities is significantly less than that of the steam electric power generating stations. In general, the source of water at these facilities is purchased from local municipalities. The one exception to this exclusion is the water use information at the corporate headquarters in Detroit, MI. Geographically, DTE is only reporting on Michigan operations.
Non-Utility Operations	DTE Energy is focusing on the company's largest sources of water withdrawal and use; namely, our steam electric power generating stations and company headquarters. These generating stations operate under the authority of NPDES permits, and local sanitary sewer permits, where applicable to industrial wastewater. The company does not track all types of water inputs and outputs for its non-utility operations such as power & industrial projects and energy trading services. Geographically, DTE is only reporting on Michigan operations.
Utility Operations	DTE Energy is minority owner of a pumped storage facility in Michigan; this plant generates electricity and is regulated. Operations and water reporting for this facility is performed by the majority owner, therefore it is excluded from this questionnaire. Geographically, DTE is only reporting on Michigan operations.

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	Direct: Sufficient amounts of good quality freshwater are vital for non-contact cooling at our steam electric generating plants as currently designed. We could not supply electricity, an essential product for customers, without this resource. Additionally, water quality is a significant concern, as certain chemicals in water can affect operations through pipe and condenser tube corrosion. We have measures in place to resolve issues related to small changes in water quality. For example, DTE uses certain polymers to reduce conductivity of water before it is used in steam electric generating plants. In the future, with the transition of the power generation base, including the reduction in coal power generation, and the increase in renewable power generation, the importance of direct use of water will decrease from vital to important. Indirect: Sufficient amounts of good quality freshwater are required at facilities throughout the DTE Energy organization. Municipal water supply for employee use is necessary to support all our operations. Additionally, freshwater is necessary for the production and processing of fuel used for the company's power generating plants. In terms of DTE's supply chain, reduction in the company's use of coal as a fuel source in the future (2023 & 2040) will make water a less important aspect of the fuel supply process.
Sufficient amounts of recycled, brackish and/or produced water available for use	Important	Neutral	Direct: Sufficient amounts of recycled water are required for non-contact cooling at two of our steam electric generating plants (Fermi 2 and Greenwood). These two plants represent approximately 25% of DTE's water use, giving it the direct use rating of "important". Indirect: Although the indirect use of recycled, brackish and/or produced water has not been formally evaluated, it is estimated that this water input is not a significant part of the value chain for DTE. Freshwater availability is not a concern, giving recycled water an importance rating of "neutral."

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%	Of the 13 facilities included in this disclosure, 100% are measured and monitored for withdrawal volumes. Total withdrawals are calculated from circulation pump nameplate capacity and pump run time for surface water sources, and through metering for municipal water sources. Most withdrawals are in the form of noncontact cooling water for our electric generating facilities. These fresh water withdrawals are measured and monitored for monthly NPDES reporting, as well as annual water use reporting for the state of Michigan. These reports are required by federal and state regulations, and reflects continuous monitoring.
Water withdrawals – volumes from water stressed areas	Not relevant	Most withdrawals are not from water stressed areas. There are seven electric generating stations and one natural gas compressor station that withdraw fresh water from the Michigan Great Lakes, which are located in the St. Lawrence watershed, a relatively water abundant area. Based on the WRI's Aqueduct Water Risk Atlas for electric power, some of DTE's sites have been mapped as medium to high risk, with much of Michigan being low to medium risk. However, little weighting should be given to the "Baseline Water Stress" category for Michigan because of the low likelihood of withdrawals affecting the abundant supply. Thus, our sites are located in mostly low-medium risk areas. Additionally, water stress in DTE's operational areas is expected to remain the same in the next 10 years per the Atlas' projections.
Water withdrawals – volumes by source	76-99	Of the 13 facilities included in this disclosure, 99% are measured and monitored for water withdrawals by source. Total withdrawals are calculated from circulation pump nameplate capacity and pump run time for surface water sources, and through metering for municipal water sources. Most withdrawals are in the form of noncontact cooling water for our electric generating facilities. These fresh water withdrawals from the Great Lakes basin are measured and monitored for monthly NPDES reporting, as well as annual water use reporting for the state of Michigan. These reports are required by federal and state regulations. Other surface water withdrawals are made for dust control purposes, primarily at electric generation and coal processing facilities. These withdrawals are typically not measured or monitored. Other withdrawals are from ground water, rainwater and municipal water supplies; these withdrawals may not be measured, and account for <1% of the total.
Entrained water associated with your metals & mining sector activities - total volumes [only metals and mining sectors]	<Not Applicable>	<Not Applicable>
Produced water associated with your oil & gas sector activities - total volumes [only oil and gas sector]	<Not Applicable>	<Not Applicable>
Water withdrawals quality	100%	Of the 13 facilities included in this disclosure, 100% are measured and monitored for water withdrawals quality. We monitor water withdrawal quality at the facility level for monthly NPDES reporting. For example, per NPDES permit requirements, at all our plants, we measure temperature of intake waters continuously. Mercury is monitored quarterly as a requirement of the Pollutant Minimization Program (PMP).
Water discharges – total volumes	100%	Of the 13 facilities included in this disclosure, 100% are measured and monitored for water discharge volumes. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. Most of discharges are in the form of noncontact cooling water from our electric generating facilities. These discharges are measured and monitored for monthly NPDES reporting, as well as annual water use reporting for the state of Michigan. These reports are required by federal and state regulations. For example, the River Rouge Power Plant can discharge a maximum of 654.6 MGD of treated processed water and an unspecified amount of stormwater through the main outfall. The NPDES permit requires daily monitoring of flow.
Water discharges – volumes by destination	100%	Of the 13 facilities included in this disclosure, 100% are measured and monitored for water discharge volumes by destination. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. Most discharges are in the form of noncontact cooling water from our electric generating facilities to surface waters. These discharges are returned to surface waters, and are measured and monitored for monthly NPDES reporting, as well as annual water use reporting for the state of Michigan. These reports are required by federal and state regulations.
Water discharges – volumes by treatment method	76-99	On Site Treatment: Of the 13 facilities included in this disclosure, most discharges (76-99%) are associated with our electric generating facilities, and are treated on site with various methods (e.g. chemical clarification, plain clarification, oil/water separation). Off Site Treatment: The remaining discharges are largely associated with the potable water needs or our facilities, and are treated by independent off-site municipal treatment plants or private treatment storage & disposal facilities (TSDF). These discharges are returned to surface waters in most cases, and are measured/monitored by the offsite facility.
Water discharge quality – by standard effluent parameters	76-99	On Site Treatment: Water quality standards for the most of discharges are provided in the NPDES permits associated with our electric generating facilities. Of the 13 facilities included in this disclosure, this represents 76-99%. The NPDES program is administered by the State of Michigan where most discharges take place. Off Site Treatment: Water quality standards for the remaining discharges are governed by the permits associated with the municipal treatment plants or private TSDFs. These facilities have NPDES permits of their own in most cases.
Water discharge quality – temperature	76-99	Most discharges are in the form of noncontact cooling water from our electric generating facilities, representing 76-99% of the 13 facilities included in this disclosure. Temperatures of these discharges are measured and monitored for monthly NPDES reporting, as well as the calculation of the thermal discharge. These reports are required by federal and state regulation. Discharge temperature is not monitored for DTE headquarters, which discharges to the city sewer.
Water consumption – total volume	76-99	Most consumption (76-99%) is calculated for our electric generating facilities and reported annually to the State of Michigan. Consumption for these operations are neither measured nor monitored directly. However, measured and monitored data is used in the formulas for calculating water consumption, which is accepted industry practice. This figure represents the evaporative loss, which is calculated for each facility using average monthly heat input, and regional and seasonal coefficients for evaporative loss; these values are then added and reported as total consumption for the company. The consumption volume is associated with other operations such as potable water needs, groundwater withdrawal/discharges, and dust control, which we do not monitor.
Water recycled/reused	1-25	Cooling water is recycled at two of our steam electric generating plants (Fermi 2 and Greenwood). These two plants represent approximately 15% of the 13 sites included in this disclosure. Recirculation pump capacity is multiplied by the number of hours of operation to determine the amount of water recycled/reused.
The provision of fully-functioning, safely managed WASH services to all workers	100%	Fully functioning Water Supply, Adequate Sanitation and Hygiene (WASH) is provided for all workers throughout the organization. Our operations are located in well-developed areas with modern facilities where WASH is readily available. WASH services are metered for billing purposes, which are mainly provided by local municipalities.

W-EU1.2a

(W-EU1.2a) For your hydroelectric operations, what proportion of the following water aspects are regularly measured and monitored?

	% of sites/facilities/operations measured and monitored	Please explain
Fulfilment of downstream environmental flows	Not monitored	DTE Energy is minority owner of a pumped storage facility in Michigan; this plant generates electricity and is regulated. Operations and water reporting for this facility is performed by the majority owner, therefore it is excluded from this questionnaire.
Sediment loading	Not monitored	DTE Energy is minority owner of a pumped storage facility in Michigan; this plant generates electricity and is regulated. Operations and water reporting for this facility is performed by the majority owner, therefore it is excluded from this questionnaire.
Other, please specify	Not monitored	DTE Energy is minority owner of a pumped storage facility in Michigan; this plant generates electricity and is regulated. Operations and water reporting for this facility is performed by the majority owner, therefore it is excluded from this questionnaire.

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	4291312	About the same	The thresholds for comparison to previous years are as follows: >50% change = "Much Lower"/"Much Higher", 25-50% change = "Lower"/"Higher", and <25% change = "About the Same." Total withdrawals are calculated from circulation pump nameplate capacity and pump run time for surface water sources, and through metering for municipal water sources. The amount of withdrawal in 2018 was approximately 5% higher than in 2017 (4,098,319 ML). DTE is in the process of retiring several coal-fired power plants, which will result in less total future withdrawals in the company's operations.
Total discharges	4215364	About the same	Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The amount of discharge in 2018 was approximately 5% higher than in 2017 (4,025,951 ML). DTE is in the process of closing several coal-fired power plants, which will result in less total future withdrawals in the company's operations.
Total consumption	77275	About the same	This figure represents the evaporative loss, which is calculated for each facility using average monthly heat input, and regional and seasonal coefficients for evaporative loss; these values are then added and reported as total consumption for the company. The amount of consumption in 2018 was approximately 5% higher than in 2017 (73,667 ML). Major changes to total consumption are not anticipated in the near future; however, climate change may significantly affect evaporative loss on a longer timeline.

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	4288647	About the same	Sufficient amounts of good quality freshwater are relevant because they are used for non-contact cooling at our steam electric generating plants as currently designed. We could not supply electricity, an essential product for customers, without this resource. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from pump capacity and run time. For example, the Monroe Power Plant withdraws water from Lake Erie, the magnitude of which is not directly measured, but calculated through the method described above. The amount of fresh surface water withdrawal in 2018 was approximately 5% higher than in 2017 (4,096,104). DTE is in the process of retiring several coal-fired power plants, which will result in less fresh surface water withdrawals in the company's operations.
Brackish surface water/Seawater	Not relevant	<Not Applicable>	<Not Applicable>	Withdrawal from brackish surface water/seawater is not part of our operations, and we do not expect it to be part of our operations in the future.
Groundwater – renewable	Relevant	2081	About the same	One facility, Sibley Quarry, withdraws from groundwater. The amount withdrawn in 2018 was approximately 3% higher than in 2017 (2,022 ML). Withdrawal from groundwater is calculated from pump capacity and run time.
Groundwater – non-renewable	Not relevant	<Not Applicable>	<Not Applicable>	Withdrawal from groundwater - non-renewable sources is not part of our operations, and we do not expect it to be part of our operations in the future.
Produced/Entrained water	Not relevant	<Not Applicable>	<Not Applicable>	Withdrawal from produced/entrained water is not part of our operations, and we do not expect it to be part of our operations in the future.
Third party sources	Relevant	583	Much higher	Two facilities, Greenwood Energy Center and Company Headquarters, withdraw water from municipal sources, making it relevant to our operations. Withdrawal volumes are measured through water metering. The amount withdrawn in 2018 was approximately 202% higher than in 2017 (193 ML). In 2017, water from a county drain was used as an additional source for Greenwood but not measured. In 2018, only municipal water was used as a source, accounting for the higher volumes.

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	4215166	About the same	Discharge by destination is calculated by subtracting the estimated fresh surface water consumption from the estimated water withdrawn. The amount of discharge in 2018 was approximately 5% higher than in 2017 (4,025,773). As water withdrawals decrease in the company's future due to diversifying DTE's power generation fleet, discharges are also expected to decrease.
Brackish surface water/seawater	Not relevant	<Not Applicable>	<Not Applicable>	Discharge to brackish surface water/seawater is not part of our operations. DTE does not project including this as part of our operations in the future.
Groundwater	Not relevant	<Not Applicable>	<Not Applicable>	Discharge to groundwater is not accounted for as part of our operations. DTE does not project including this as part of our operations in the future.
Third-party destinations	Relevant	198	About the same	While many DTE facilities discharge to municipal/industrial wastewater treatment systems, we actively measure the discharge from three facilities: Fermi 2 Power Plant (30 ML), River Rouge Power Plant (24 ML), and the Company Headquarters (144 ML). For Company Headquarters, magnitude of discharge is equivalent to withdrawal. For plants, discharge is determined by an estimation using the number of discharge pumps and the run time. The amount of discharge reported in 2018 is approximately 11% higher than the amount discharged in 2017 (178 ML). In the future, it is expected that municipal/industrial discharges will stay the same or decrease due to a company-wide reduction strategy.

W1.2j

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

	% recycled and reused	Comparison with previous reporting year	Please explain
Row 1	11-25	About the same	Water is being recycled and reused at the Fermi 2 Power Plant and Greenwood Energy Center. In 2018, 25% of the water withdrawn was recycled, 5% lower than in 2017 (30%). Percentage was calculated using the CDP calculation method. Recirculation pump capacity is multiplied by the number of hours of operation to determine the amount of water recycled/reused. The Fermi 2 Power Plant incorporates evaporative loss in this calculation; however, the Greenwood Energy Center does not incorporate evaporative loss.

W-EU1.3

(W-EU1.3) Do you calculate water intensity for your electricity generation activities?

Yes

W-EU1.3a

(W-EU1.3a) Provide the following intensity information associated with your electricity generation activities.

Water intensity value (m3)	Numerator: water aspect	Denominator: unit of production	Comparison with previous reporting year	Please explain
113.97	Freshwater withdrawals	MWh	This is our first year of measurement	Water intensity is calculated the total water withdrawn from surface water sources for power generating facilities (m3), and total electric energy produced from these facilities based on nameplate capacity and run time (MWH). Water intensity is expected to decrease with DTE's strategy of retiring coal-fired power plants and replacing them with less water-intensive generation units. This intensity metric is used internally to determine the efficiency of electric generation facilities in terms of water. Because this is our first year of measurement, intensity cannot be compared to the previous year.

W1.4

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

Yes, our suppliers

Yes, our customers or other value chain partners

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

1-25%

% of total procurement spend

1-25

Rationale for this coverage

The proportion of suppliers that receive surveys corresponds to approximately 25% of total procurement spend. Suppliers are selected for engagement based on the following criteria: If the supplier has a DTE Supplier Performance Management (SPM) scorecard, if they are a top 100 supplier for DTE spend, or if a DTE sustainability team member's business unit requests that the supplier take the survey. This selection process identifies the suppliers that are most impactful and significant to the organization. Suppliers are requested to report on water use to measure success of actions and identify areas of improvement throughout DTE's supply chain. DTE uses the results of the survey when making final decisions on supplier selection, giving suppliers incentive to report on water management and stewardship.

Impact of the engagement and measures of success

DTE is part of the Electric Utility Industry Sustainable Supply Chain Alliance (EUISSCA), an organization of utilities and suppliers collaborating to advance sustainability best practices in supply chain activities and supplier networks. Water use for suppliers is self-reported via The Sustainability Project (TSP) supplier survey tool, which was launched in 2018. DTE uses this information to measure success of actions and identify opportunities for improvement across the Company's supply chain. In general, questions revolve around measures for water efficiency and conservation (e.g., water-conserving plumbing indoors). Data/metrics are also requested to supplement responses. Success will be measured by the number of conservation measures implemented by suppliers, reductions in annual water use, whether targets are in place and measured, whether data is third party verified, and whether performance is publicly reported.

Comment

Survey questions vary by industry (e.g., for construction, questions focus on minimizing water use in water-challenged areas and implementing stormwater management plans). Metrics are requested to supplement responses; however, they are not required at this time. In 2019, DTE intends to change the TSP survey to require metrics where water conservation measures are claimed by suppliers. More information on EUISSCA and TSP can be found at: https://www.euissca.org/the-sustainability-project.html.

W1.4b

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

Type of engagement

More information on TSP can be found at: https://www.euissca.org/the-sustainability-project.html.

DTE uses information from the TSP supplier survey tool to measure success of actions and identify opportunities for improvement across the Company's supply chain. Success is measured by the number of conservation measures implemented by suppliers, reductions in annual water use, whether targets are in place and measured, whether data is third party verified, and whether performance is publicly reported. DTE considers the results of the survey when making final decisions on supplier selection, giving suppliers incentive for improving water management strategies.

The proportion of suppliers that receive surveys corresponds to approximately 25% of total procurement spend. Suppliers are selected for engagement based on the following criteria: If the supplier has a DTE Supplier Performance Management (SPM) scorecard, if they are a top 100 supplier for DTE spend, or if a DTE sustainability team member's business unit requests that the supplier take the survey. This selection process identifies the suppliers that are most impactful and significant to the organization. Suppliers are requested to report on water use to measure success of actions and identify areas of improvement throughout DTE's supply chain. DTE uses the results of the survey when making final decisions on supplier selection, giving suppliers incentive to improve water management and stewardship.

1-25

1-25

Water management and stewardship is integrated into supplier evaluation processes

Incentivizing for improved water management and stewardship

Details of engagement

More information on TSP can be found at: https://www.euissca.org/the-sustainability-project.html.

DTE uses information from the TSP supplier survey tool to measure success of actions and identify opportunities for improvement across the Company's supply chain. Success is measured by the number of conservation measures implemented by suppliers, reductions in annual water use, whether targets are in place and measured, whether data is third party verified, and whether performance is publicly reported. DTE considers the results of the survey when making final decisions on supplier selection, giving suppliers incentive for improving water management strategies.

The proportion of suppliers that receive surveys corresponds to approximately 25% of total procurement spend. Suppliers are selected for engagement based on the following criteria: If the supplier has a DTE Supplier Performance Management (SPM) scorecard, if they are a top 100 supplier for DTE spend, or if a DTE sustainability team member's business unit requests that the supplier take the survey. This selection process identifies the suppliers that are most impactful and significant to the organization. Suppliers are requested to report on water use to measure success of actions and identify areas of improvement throughout DTE's supply chain. DTE uses the results of the survey when making final decisions on supplier selection, giving suppliers incentive to improve water management and stewardship.

1-25

1-25

Water management and stewardship is integrated into supplier evaluation processes

% of suppliers by number

More information on TSP can be found at: https://www.euissca.org/the-sustainability-project.html.

DTE uses information from the TSP supplier survey tool to measure success of actions and identify opportunities for improvement across the Company's supply chain. Success is measured by the number of conservation measures implemented by suppliers, reductions in annual water use, whether targets are in place and measured, whether data is third party verified, and whether performance is publicly reported. DTE considers the results of the survey when making final decisions on supplier selection, giving suppliers incentive for improving water management strategies.

The proportion of suppliers that receive surveys corresponds to approximately 25% of total procurement spend. Suppliers are selected for engagement based on the following criteria: If the supplier has a DTE Supplier Performance Management (SPM) scorecard, if they are a top 100 supplier for DTE spend, or if a DTE sustainability team member's business unit requests that the supplier take the survey. This selection process identifies the suppliers that are most impactful and significant to the organization. Suppliers are requested to report on water use to measure success of actions and identify areas of improvement throughout DTE's supply chain. DTE uses the results of the survey when making final decisions on supplier selection, giving suppliers incentive to improve water management and stewardship.

1-25

1-25

% of total procurement spend

More information on TSP can be found at: https://www.euissca.org/the-sustainability-project.html.

DTE uses information from the TSP supplier survey tool to measure success of actions and identify opportunities for improvement across the Company's supply chain. Success is measured by the number of conservation measures implemented by suppliers, reductions in annual water use, whether targets are in place and measured, whether data is third party verified, and whether performance is publicly reported. DTE considers the results of the survey when making final decisions on supplier selection, giving suppliers incentive for improving water management strategies.

The proportion of suppliers that receive surveys corresponds to approximately 25% of total procurement spend. Suppliers are selected for engagement based on the following criteria: If the supplier has a DTE Supplier Performance Management (SPM) scorecard, if they are a top 100 supplier for DTE spend, or if a DTE sustainability team member's business unit requests that the supplier take the survey. This selection process identifies the suppliers that are most impactful and significant to the organization. Suppliers are requested to report on water use to measure success of actions and identify areas of improvement throughout DTE's supply chain. DTE uses the results of the survey when making final decisions on supplier selection, giving suppliers incentive to improve water management and stewardship.

1-25

Rationale for the coverage of your engagement

More information on TSP can be found at: https://www.euissca.org/the-sustainability-project.html.

DTE uses information from the TSP supplier survey tool to measure success of actions and identify opportunities for improvement across the Company's supply chain. Success is measured by the number of conservation measures implemented by suppliers, reductions in annual water use, whether targets are in place and measured, whether data is third party verified, and whether performance is publicly reported. DTE considers the results of the survey when making final decisions on supplier selection, giving suppliers incentive for improving water management strategies.

The proportion of suppliers that receive surveys corresponds to approximately 25% of total procurement spend. Suppliers are selected for engagement based on the following criteria: If the supplier has a DTE Supplier Performance Management (SPM) scorecard, if they are a top 100 supplier for DTE spend, or if a DTE sustainability team member's business unit requests that the supplier take the survey. This selection process identifies the suppliers that are most impactful and significant to the organization. Suppliers are requested to report on water use to measure success of actions and identify areas of improvement throughout DTE's supply chain. DTE uses the results of the survey when making final decisions on supplier selection, giving suppliers incentive to improve water management and stewardship.

Impact of the engagement and measures of success

More information on TSP can be found at: https://www.euissca.org/the-sustainability-project.html.

DTE uses information from the TSP supplier survey tool to measure success of actions and identify opportunities for improvement across the Company's supply chain. Success is measured by the number of conservation measures implemented by suppliers, reductions in annual water use, whether targets are in place and measured, whether data is third party verified, and whether performance is publicly reported. DTE considers the results of the survey when making final decisions on supplier selection, giving suppliers incentive for improving water management strategies.

Comment

More information on TSP can be found at: https://www.euissca.org/the-sustainability-project.html.

W1.4c

(W1.4c) What is your organization's rationale and strategy for prioritizing engagements with customers or other partners in its value chain?

Our rationale is to maintain open channels of communication with employees, government agencies, public officials, the media, and the public to meet their information needs regarding energy and environmental issues. We participate with government agencies and others in framing responsible laws, regulations, and standards affecting the community, our customers, employees, and the environment. We partner with over 15 private organizations and government agencies including Wildlife Habitat Council, The Nature Conservancy, Friends of the Detroit River, and other water and wildlife conservation organizations. DTE works with these organizations because of their shared dedication to water/wildlife conservation, and the opportunity to collaborate with like-minded individuals. One method of engagement is the DTE Energy Green Team, a company-wide organization of employees, retirees, family members, and friends who volunteer their time to work on environmental projects on our properties and in the communities we serve. The team engages with Detroit River International Wildlife Refuge, Friends of the Detroit River, and other organizations through volunteer work and community outreach. Customers and other partners in our value chain recognize DTE Energy as an organization on the front lines of environmental sustainability. Success of this type of engagement is measured through the extent of exposure to other organizations and agencies, the number of positive environmental actions implemented, and public perceptions of DTE. Our Environmental Policy, conservation initiatives, and partnerships are also available for the public to view on our website.

W2. Business impacts

W2.1

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

Yes

W2.1a

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

Country/Region

For fly ash transport water, compliance with ELG requirements begins as early as 11/1/2018, but no later than 12/31/2023. However, the costs for compliance have already begun in the form of technology evaluations, testing and engineering. With the postponement in place as previously described, the length of impact for BATW and FGD wastewater is uncertain. The total exact financial impact is unknown; the number reported represents estimated 2018 capital expenses related to ELG and 316(b) compliance. The Company is currently evaluating a suite of technologies that would give us compliance with the ELGs. We are forecasting significant expenses in 2020 and later years. DTE's response to regulatory impacts improves water security for the Company by ensuring environmental regulatory compliance, which protects water sources. Another detrimental cost is related to the revised 316(b) regulations of the Clean Water Act for cooling water intake structures (CWIS). The substantial effort to comply with the revised regulations is expected to result in tighter operational performance for CWIS at the applicable facilities.

9100000

Engage with regulators/policymakers

Revised Effluent Limitation Guidelines (ELGs) for steam electric plants were finalized on September 30, 2015. New limits imposed a substantive financial burden to the company, and were one of many contributing factors to several plant closures. The most significant changes were the requirements to cease discharge of bottom ash transport water (BATW) and fly ash transport water and perform enhanced treatment of flue gas de-sulfurization (FGD) wastewater. Closing plants required the company to invest in new base load generation. The revised ELGs will only impact plants that will continue to operate beyond the latest compliance date. The impact will be in the form of both capital and operation/maintenance costs. In late 2017, a new ELG rule was issued that resulted in the postponement of compliance dates for BATW and FGD waste water until new requirements can be developed and issued. The postponement lends uncertainty to the company's strategy for complying with the ELGs as we currently do not know what the new requirements for BATW and FGD waste water will be. Fly ash transport water requirements from the 2015 Rule are still in effect. It is expected that the rule will be finalized in 2019. This impact is detrimental to the Company because additional capital investment may impact customer rates.

Increased compliance costs

Tighter regulatory standards

Regulatory

St. Lawrence

United States of America

River basin

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Increased compliance costs

Tighter regulatory standards

Regulatory

St. Lawrence

Type of impact driver

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Increased compliance costs

Tighter regulatory standards

Regulatory

Primary impact driver

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Tighter regulatory standards

Primary impact

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Increased compliance costs

Description of impact

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Primary response

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Engage with regulators/policymakers

Total financial impact

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Description of response

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W2.2

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

No

W3. Procedures

W-EU3.1

(W-EU3.1) How does your organization identify and classify potential water pollutants associated with your business activities in the electric utilities sector that could have a detrimental impact on water ecosystems or human health?

Water pollutants are identified and classified as part of the application process for the National Pollutant Discharge Elimination System (NPDES) permit. As part of the permitting process the State of Michigan requires us to assess water quality parameters specific to our industry. We must also comply with regulatory requirements related to accidental spills and other incidents related to release of hazardous materials at our facilities. In addition, we conduct environmental impact assessments as part of our licensing process for plants. DTE categorizes pollutants into two groups based on toxicity level (i.e., toxic pollutants and other pollutants). The assessment of overall impact includes chronic/acute toxicity, persistence, and bioaccumulation. For example, at DTE Trenton Channel Power Plant canals and drains receiving our discharge are protected for agricultural uses, navigation, industrial water supply, public water supply in areas with designated public water supply intakes, warm-water fish, other indigenous aquatic life and wildlife, partial body contact recreation, and fish consumption. For toxic pollutants at this plant, the volume of canals and drains used to ensure that effluent limitations are sufficiently stringent to meet Water Quality Standards is 25% of the applicable design flow of the receiving stream. The Company updates thresholds based on changes to NPDES permit requirements.

W-EU3.1a

(W-EU3.1a) Describe how your organization minimizes the adverse impacts of potential water pollutants associated with your activities in the electric utilities sector on water ecosystems or human health.

Potential water pollutant	Description of water pollutant and potential impacts	Management procedures	Please explain
Coal combustion residuals	Coal combustion residuals consist of fly ash, bottom ash, boiler slag, and flue gas desulfurization (FGD) solids produced at power plants burning fossil fuel. Potential impacts to surface waters include changes in pH and increased Total Suspended Solids (TSS), which can affect the health of aquatic life that live optimally under certain pH conditions.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages Community/stakeholder engagement Emergency preparedness	We comply with NPDES permits, develop and implement Storm Water Pollution Prevention Plans (SWPPP), Spill Prevention, Control & Countermeasure (SPCC) Plans, and other incident response plans. These procedures manage risks of impacts by applying treatment methodologies appropriate for controlling TSS and pH. The success of these procedures is evaluated by regular monitoring of discharges after treatment. DTE also uses dry ash for beneficial reuse, and has initiated compliance with the new coal combustion residuals (CCR) rules by closing unlined bottom ash impoundments and ash ponds.
Radiation	During normal operations, nuclear power plants release small amounts of radiation that are strictly regulated by the US Nuclear Regulatory Commission (NRC). The regulatory system for radioactive materials is designed to prevent the possibility that anyone could receive an exposure even close to the levels that might inflict short-term damage. Radiation can adversely impact aquatic life, as well as human health, by altering genetics and interfering with reproduction.	Measures to prevent spillage, leaching, and leakages Community/stakeholder engagement Emergency preparedness Other, please specify (Compliance with US NRC rules and regs)	Experience has shown that, during normal operations, nuclear power plants typically release only a small fraction of the radiation allowed by the NRC's established limits. The radioactive material that fuels a nuclear power plant is contained in ceramic fuel pellets that are capable of withstanding thousands of degrees of heat. These fuel pellets are then encased in hollow metal rods that help keep the material from interacting with the water that cools the reactor. In addition, the reactor's thick metal walls and piping, as well as a massive reinforced concrete containment structure, are designed to keep the coolant, fuel, and associated radiation isolated from the environment. Our nuclear power plant, Fermi 2, adheres to stringent regulations of the U.S. Nuclear Regulatory Commission (NRC), in addition to robust internal standards and procedures. The NRC reviews a reactor license application to address detrimental environmental impacts. NRC publishes this in its Environmental Impact Statement and provides ways to mitigate these impacts. DTE ensures that Fermi 2 complies with radiation dose limitations and monitors radiation release; reports can be found by the general public on the NRC website. The procedures identified manage risk by minimizing radiation released to the environment through compliance measures. As stated, the success of these procedures is evaluated by regular monitoring of discharges, such as required periodic fish studies in waters surrounding the Fermi 2 Power Plant.
Contaminated cooling water	Cooling water systems are used to remove waste heat from the process to the environment. Circulating pumps move the cooled water through a piping circuit that includes heat exchangers, reactor jackets, and other critical pieces of process equipment and then back to either the surface water (once-through system) or the cooling tower (closed-cycle system). Cooling water has the potential to degrade ecosystems by increasing the temperature of surface waters in the mixing zone. Health and livability can be reduced for aquatic species that only thrive under certain temperatures. Since large volumes of air pass through a cooling tower to enable cooling, potential biological impacts must be controlled.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages Community/stakeholder engagement Emergency preparedness	Cooling water contamination is prevented by following operation and maintenance procedure and complying with NPDES permit limits and specifications. These procedures manage risk by limiting contamination. The success of these procedures is evaluated by regular monitoring of discharges. For example, chlorine is used in cooling water systems to control biological growth, and total residual chlorine is monitored on a regular basis.
Thermal pollution	Thermal pollution is any deviation from the natural temperature in a habitat and can range from increased temperatures associated with industrial cooling activities to discharges of cold water into streams. This can detrimentally impact aquatic ecosystems by affecting biological activities of organisms and decreasing oxygen supply.	Compliance with effluent quality standards Community/stakeholder engagement Emergency preparedness	Thermal effluents are regulated because heat is defined as a pollutant under Clean Water Act (CWA) Section 502(6). DTE has performed thermal plume studies for power plants with identified risk. We comply with NPDES permits that authorize any thermal effluent discharge. This compliance manages risk by monitoring any negative impacts thermal pollution can have on aquatic ecosystems and whether action should be taken to minimize the pollution. The success of these procedures is evaluated by regular monitoring of discharges.
Other, please specify	Mercury is another relevant water pollutant for DTE. The Clean Water Act identifies acceptable pollution levels in water for mercury that must be complied with to protect human health, fish, and wildlife. Mercury impacts aquatic ecosystems, including fish, by increasing toxicity in organisms. This can have a potential impact for humans consuming these organisms.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages Community/stakeholder engagement Emergency preparedness	We comply with NPDES permits that set up monitoring requirements and limits for mercury. We also developed and implement Pollution Minimization Plans (PMPs) for mercury. These procedures manage risks by reviewing the sources on a semi-annual basis and controlling mercury sources as feasible. The success of these procedures is evaluated by regular monitoring and reporting of discharges.

W3.3

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

Yes, water-related risks are assessed

W3.3a

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

Direct operations

Coverage
Partial

Risk assessment procedure
Water risks are assessed as a standalone issue

Frequency of assessment
Annually

How far into the future are risks considered?
3 to 6 years

Type of tools and methods used
International methodologies
Other

Tools and methods used
Internal company methods
Other, please specify (ISO 14001)

Comment
DTE conducts annual spill plan reviews, monthly environmental compliance reviews, annual corporate environmental compliance audits, and self-assessment audits conducted in conformance with ISO 14001. Coverage is partial because water-related risk assessment is limited to only the utility sector of our operations.

Supply chain

Coverage
Partial

Risk assessment procedure
Water risks are assessed as a standalone issue

Frequency of assessment
Annually

How far into the future are risks considered?
3 to 6 years

Type of tools and methods used
Other

Tools and methods used
Internal company methods
Other, please specify (The Sustainability Project (TSP) supplier survey tool)

Comment
DTE is part of the Electric Utility Industry Sustainable Supply Chain Alliance (EUISSCA), an organization of utilities and suppliers collaborating to advance sustainability best practices in supply chain activities and supplier networks. Water use for suppliers is self-reported via The Sustainability Project (TSP) supplier survey tool, which was launched in 2018. Survey questions vary by industry and are used to assess water-related risks for our supply chain. DTE uses this information to measure success of actions and identify opportunities for improvement across the Company's supply chain. Coverage is partial because the TSP survey is sent to only a portion of our suppliers, as identified in section W1.4a.

Other stages of the value chain

Coverage
None

Risk assessment procedure
<Not Applicable>

Frequency of assessment
<Not Applicable>

How far into the future are risks considered?
<Not Applicable>

Type of tools and methods used
<Not Applicable>

Tools and methods used
<Not Applicable>

Comment
Water-related risks are not assessed for other stages of the value chain.

W3.3b

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

	Relevance & inclusion	Please explain
Water availability at a basin/catchment level	Relevant, sometimes included	Water availability is important to our operations, particularly for cooling water use; however, we operate in a region where water is readily available. DTE uses the MI Withdrawal Assessment Tool when evaluating new large quantity withdrawal projects to determine the potential impact on nearby water resources.
Water quality at a basin/catchment level	Relevant, always included	Water quality is relevant to operations because DTE aims to reduce environmental impact and avoid noncompliance when discharging water. Water quality is assessed by meeting regulatory requirements and avoiding uncontrolled releases.
Stakeholder conflicts concerning water resources at a basin/catchment level	Relevant, sometimes included	Stakeholder concerns are relevant to operations because DTE aims to be community-minded and consider all stakeholders and water uses when using water resources. On an as-needed basis, we will engage with stakeholders on water issues. For example, DTE engages with stakeholders by responding to complaints from the public regarding potential water impacts.
Implications of water on your key commodities/raw materials	Not considered	Implications of water on key commodities/raw materials is not considered.
Water-related regulatory frameworks	Relevant, always included	Water regulatory risk is a key driver for our operations. Regulations shape the nature of our power generation fleet, and the Company's policies and procedures are based on these regulations.
Status of ecosystems and habitats	Relevant, always included	Impacts on ecosystems are included in permit application/assessments, and voluntary habitat preservation and restoration is a priority for the company. For example, the Company adjusts the design of new projects to avoid or limit impacts on wetlands, and effectively manage stormwater.
Access to fully-functioning, safely managed WASH services for all employees	Relevant, always included	Employee safety is a number one priority for the company and providing access to fully functioning safety requirements related to water is essential. DTE's safety department ensures that water provided at our facilities adheres to drinking water standards.
Other contextual issues, please specify	Not considered	Other contextual issues are not considered.

W3.3c

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

	Relevance & inclusion	Please explain
Customers	Relevant, sometimes included	Customers are included in risk assessment to maintain DTE's reputation of providing reliable and efficient energy to our customers. Generally, the company's use of water does not directly impact customers; however, we will engage customers as necessary if a water risk involves potential customer impact.
Employees	Relevant, always included	Employees are included in risk assessment to ensure workplace safety. Employee training and attention to water-related aspects are key to minimizing water risks. Through the implementation of our ISO 14001 certified Environmental Management System, employees become aware of water-related aspects and risks and are instrumental in controlling these risks.
Investors	Relevant, sometimes included	Investors are considered in risk assessment to increase confidence in investment return and improve DTE's capital acquisition. Investor reaction to water risk, as well as overall environmental risks, for the company are considered at an enterprise level. However, water risks do not receive the same attention from investors as other environmental risks, such as carbon emissions.
Local communities	Relevant, always included	Local communities are considered in risk assessment because our water use and discharges can potentially impact local communities that use these waters. We partner with over 15 private organizations and government agencies including Wildlife Habitat Council, The Nature Conservancy, Friends of the Detroit River, and other water and wildlife conservation organizations. DTE engages with Detroit River International Wildlife Refuge, Friends of the Detroit River, and other organizations through volunteer work and community outreach. We work with local regulatory agencies to meet required water standards. The risks and impacts to these communities are considered during risk assessment discussions.
NGOs	Relevant, sometimes included	Because our water use and discharges potentially impact local communities and we work with agencies on water permits, NGOs get involved with the permit review process and are considered in risk assessment. Risks from NGO engagement are considered during water permit application periods and/or when NGOs choose to engage with the company.
Other water users at a basin/catchment level	Not considered	Other water users at a basin/catchment level are not considered.
Regulators	Relevant, always included	Regulators are considered in risk assessment because regulations drive much of our water risk and can result in increased costs, changes in operations, and upgrades to infrastructure. Risks of non-compliance with these regulations is a key driver performing a risk assessment. For example, DTE may engage with regulators to negotiate favorable limits/allocation in reference to potential new water regulations.
River basin management authorities	Relevant, sometimes included	River basin management authorities are considered in risk assessment to decrease the potential of water conflicts. It's not clear what river basin management authorities should be considered in a risk assessment for our region. We engage with the U.S. Army Corps of Engineers on projects related to dredging or navigation channels and we would evaluate risks related to these projects on an as needed case by case basis.
Statutory special interest groups at a local level	Relevant, sometimes included	Tribes or International Joint Commission (IJC) are considered in risk assessment to decrease the potential of water conflicts. Tribes or IJC may engage us in specific water issues that may arise on a case by case basis related to our water use and quality of water discharges.
Suppliers	Relevant, always included	Suppliers are considered in risk assessment to ensure sufficient supply of goods and services. We require all our suppliers to meet the environmental regulatory requirements and comply with sustainable design and construction practices. We engage with suppliers through an annual supplier survey requesting information about water efficiency measures.
Water utilities at a local level	Relevant, always included	Our facilities discharge to locally-owned water utilities and are required to meet pre-treatment standard prior to discharge. DTE considers water utilities at a local level in risk assessment because the potential to exceed these standards are a significant risk to the company.
Other stakeholder, please specify	Not considered	Other stakeholders are not considered.

W3.3d

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

DTE considers regulatory risks, reputational risks, availability risks, and natural disaster risks that create water-related risks. DTE uses the WRI Aqueduct Water Risk Atlas to assess relevant water-related risks for the electric power industry currently, as well as projected conditions. Risk of drought and baseline water stress (availability risks) are given little weight because of the abundant water supply of the Great Lakes system. DTE conducts annual spill plan reviews, monthly environmental compliance reviews, annual corporate environmental compliance audits, and self-assessment audits conducted in conformance with ISO 14001. DTE makes decisions relating to risk response by using cost-benefit analyses, considering investor objectives, and environmental impact.

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, both in direct operations and the rest of our value chain

W4.1a

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

Most of our operations and supply chain takes place in Michigan, which has an abundant fresh water supply. The risks to our company are significant at this time, (e.g. as regulations continue to change and challenge our industry); however; DTE is mitigating these risks through transitioning its electricity generation fleet to less water intensive technologies, such as renewables and combined cycle natural gas. DTE defines substantive impact as a legislative, regulatory, or physical change in supply that would reduce our ability to withdraw the amount of water needed to produce adequate amount of electricity for our customers. Additionally, the definition extends to any financial and strategic impact that an investor would deem substantive, and DTE aims to maintain a reputation of sound risk assessment and management among its investors. For example, extreme weather conditions are identified as a risk in our 2018 10-K Annual Report, which we would consider a substantive financial or strategic impact if it caused damage to the electric distribution system infrastructure and power generation facilities. The 2019 Polar Vortex is an example of an event we would consider substantive. Damage to facilities due to cold weather impacts daily operations relating to water availability and usability. Recovering from these setbacks would result in increased costs from unforeseen maintenance to our power generation facilities to improve water usability, therefore negatively impacting the financial performance of the company. DTE does not define specific numerical thresholds for substantive water-related impact.

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	8	51-75	DTE considers the following a facility: company headquarters, electric power generating stations, and all sites that hold NPDES permits (the 13 sites included in this disclosure). A facility exposed to water risk is defined as one that has the capacity to withdraw over 100,000 gallons of water per day (GPD) or has a surface water withdrawal permit by the State of Michigan. There are seven electric generating stations and one natural gas compressor station that withdraw fresh water from the Michigan Great Lakes, which are located in the St. Lawrence watershed. All 8 facilities are in the eastern United States, a relatively water abundant area. Because DTE draws from the Great Lakes system, water risk is significantly lower than any water risk present in the western U.S. region.

W4.1c

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

Country/Region

All eight units (seven electric generating stations and one natural gas compressor station) that withdraw fresh water from the Michigan Great Lakes are located in the St. Lawrence watershed. This represents 62% of the 13 facilities included in this disclosure. A significant decrease in the water level within the watershed could put these facilities at risk of damage or losing production. The amount of generation or production capacity lost by a significant change in the water level within the watershed could range from 0% to 69% depending on the nature of the event or situation. For example, a significant drop in water level in the Great Lakes could result in the loss of cooling water, and therefore generation or production, at one or all the facilities. DTE's response would be to increase focus on diversifying its power generation fleet to reduce water reliance, and exploring alternative options for water supply. This percentage divides the power generation from the 8 facilities by the power generation from DTE's entire generation fleet, including renewable energy, natural gas, and hydroelectric power. The revenue generated by these 8 facilities represents 37% of our global revenue. Great Lakes water levels rise and fall on a cyclical basis over decades. Currently, they are at an all-time high, but were at record lows 20 years ago. DTE has adjusted to these cyclical fluctuations by incorporating measures, such as dredging of intakes during low water levels to counteract these changes.

26-50

<Not Applicable>

51-75

<Not Applicable>

51-75

8
St. Lawrence
United States of America

River basin

All eight units (seven electric generating stations and one natural gas compressor station) that withdraw fresh water from the Michigan Great Lakes are located in the St. Lawrence watershed. This represents 62% of the 13 facilities included in this disclosure. A significant decrease in the water level within the watershed could put these facilities at risk of damage or losing production. The amount of generation or production capacity lost by a significant change in the water level within the watershed could range from 0% to 69% depending on the nature of the event or situation. For example, a significant drop in water level in the Great Lakes could result in the loss of cooling water, and therefore generation or production, at one or all the facilities. DTE’s response would be to increase focus on diversifying its power generation fleet to reduce water reliance, and exploring alternative options for water supply. This percentage divides the power generation from the 8 facilities by the power generation from DTE’s entire generation fleet, including renewable energy, natural gas, and hydroelectric power. The revenue generated by these 8 facilities represents 37% of our global revenue. Great Lakes water levels rise and fall on a cyclical basis over decades. Currently, they are at an all-time high, but were at record lows 20 years ago. DTE has adjusted to these cyclical fluctuations by incorporating measures, such as dredging of intakes during low water levels to counteract these changes.
26-50
<Not Applicable>
51-75
<Not Applicable>
51-75
8
St. Lawrence

Number of facilities exposed to water risk

All eight units (seven electric generating stations and one natural gas compressor station) that withdraw fresh water from the Michigan Great Lakes are located in the St. Lawrence watershed. This represents 62% of the 13 facilities included in this disclosure. A significant decrease in the water level within the watershed could put these facilities at risk of damage or losing production. The amount of generation or production capacity lost by a significant change in the water level within the watershed could range from 0% to 69% depending on the nature of the event or situation. For example, a significant drop in water level in the Great Lakes could result in the loss of cooling water, and therefore generation or production, at one or all the facilities. DTE’s response would be to increase focus on diversifying its power generation fleet to reduce water reliance, and exploring alternative options for water supply. This percentage divides the power generation from the 8 facilities by the power generation from DTE’s entire generation fleet, including renewable energy, natural gas, and hydroelectric power. The revenue generated by these 8 facilities represents 37% of our global revenue. Great Lakes water levels rise and fall on a cyclical basis over decades. Currently, they are at an all-time high, but were at record lows 20 years ago. DTE has adjusted to these cyclical fluctuations by incorporating measures, such as dredging of intakes during low water levels to counteract these changes.
26-50
<Not Applicable>
51-75
<Not Applicable>
51-75
8

% company-wide facilities this represents

All eight units (seven electric generating stations and one natural gas compressor station) that withdraw fresh water from the Michigan Great Lakes are located in the St. Lawrence watershed. This represents 62% of the 13 facilities included in this disclosure. A significant decrease in the water level within the watershed could put these facilities at risk of damage or losing production. The amount of generation or production capacity lost by a significant change in the water level within the watershed could range from 0% to 69% depending on the nature of the event or situation. For example, a significant drop in water level in the Great Lakes could result in the loss of cooling water, and therefore generation or production, at one or all the facilities. DTE’s response would be to increase focus on diversifying its power generation fleet to reduce water reliance, and exploring alternative options for water supply. This percentage divides the power generation from the 8 facilities by the power generation from DTE’s entire generation fleet, including renewable energy, natural gas, and hydroelectric power. The revenue generated by these 8 facilities represents 37% of our global revenue. Great Lakes water levels rise and fall on a cyclical basis over decades. Currently, they are at an all-time high, but were at record lows 20 years ago. DTE has adjusted to these cyclical fluctuations by incorporating measures, such as dredging of intakes during low water levels to counteract these changes.
26-50
<Not Applicable>
51-75
<Not Applicable>
51-75

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

All eight units (seven electric generating stations and one natural gas compressor station) that withdraw fresh water from the Michigan Great Lakes are located in the St. Lawrence watershed. This represents 62% of the 13 facilities included in this disclosure. A significant decrease in the water level within the watershed could put these facilities at risk of damage or losing production. The amount of generation or production capacity lost by a significant change in the water level within the watershed could range from 0% to 69% depending on the nature of the event or situation. For example, a significant drop in water level in the Great Lakes could result in the loss of cooling water, and therefore generation or production, at one or all the facilities. DTE’s response would be to increase focus on diversifying its power generation fleet to reduce water reliance, and exploring alternative options for water supply. This percentage divides the power generation from the 8 facilities by the power generation from DTE’s entire generation fleet, including renewable energy, natural gas, and hydroelectric power. The revenue generated by these 8 facilities represents 37% of our global revenue. Great Lakes water levels rise and fall on a cyclical basis over decades. Currently, they are at an all-time high, but were at record lows 20 years ago. DTE has adjusted to these cyclical fluctuations by incorporating measures, such as dredging of intakes during low water levels to counteract these changes.
26-50
<Not Applicable>
51-75
<Not Applicable>

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

All eight units (seven electric generating stations and one natural gas compressor station) that withdraw fresh water from the Michigan Great Lakes are located in the St. Lawrence watershed. This represents 62% of the 13 facilities included in this disclosure. A significant decrease in the water level within the watershed could put these facilities at risk of damage or losing production. The amount of generation or production capacity lost by a significant change in the water level within the watershed could range from 0% to 69% depending on the nature of the event or situation. For example, a significant drop in water level in the Great Lakes could result in the loss of cooling water, and therefore generation or production, at one or all the facilities. DTE’s response would be to increase focus on diversifying its power generation fleet to reduce water reliance, and exploring alternative options for water supply. This percentage divides the power generation from the 8 facilities by the power generation from DTE’s entire generation fleet, including renewable energy, natural gas, and hydroelectric power. The revenue generated by these 8 facilities represents 37% of our global revenue. Great Lakes water levels rise and fall on a cyclical basis over decades. Currently, they are at an all-time high, but were at record lows 20 years ago. DTE has adjusted to these cyclical fluctuations by incorporating measures, such as dredging of intakes during low water levels to counteract these changes.
26-50
<Not Applicable>
51-75

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

All eight units (seven electric generating stations and one natural gas compressor station) that withdraw fresh water from the Michigan Great Lakes are located in the St. Lawrence watershed. This represents 62% of the 13 facilities included in this disclosure. A significant decrease in the water level within the watershed could put these facilities at risk of damage or losing production. The amount of generation or production capacity lost by a significant change in the water level within the watershed could range from 0% to 69% depending on the nature of the event or situation. For example, a significant drop in water level in the Great Lakes could result in the loss of cooling water, and therefore generation or production, at one or all the facilities. DTE's response would be to increase focus on diversifying its power generation fleet to reduce water reliance, and exploring alternative options for water supply. This percentage divides the power generation from the 8 facilities by the power generation from DTE's entire generation fleet, including renewable energy, natural gas, and hydroelectric power. The revenue generated by these 8 facilities represents 37% of our global revenue. Great Lakes water levels rise and fall on a cyclical basis over decades. Currently, they are at an all-time high, but were at record lows 20 years ago. DTE has adjusted to these cyclical fluctuations by incorporating measures, such as dredging of intakes during low water levels to counteract these changes.
26-50
<Not Applicable>

% company's total global revenue that could be affected

All eight units (seven electric generating stations and one natural gas compressor station) that withdraw fresh water from the Michigan Great Lakes are located in the St. Lawrence watershed. This represents 62% of the 13 facilities included in this disclosure. A significant decrease in the water level within the watershed could put these facilities at risk of damage or losing production. The amount of generation or production capacity lost by a significant change in the water level within the watershed could range from 0% to 69% depending on the nature of the event or situation. For example, a significant drop in water level in the Great Lakes could result in the loss of cooling water, and therefore generation or production, at one or all the facilities. DTE's response would be to increase focus on diversifying its power generation fleet to reduce water reliance, and exploring alternative options for water supply. This percentage divides the power generation from the 8 facilities by the power generation from DTE's entire generation fleet, including renewable energy, natural gas, and hydroelectric power. The revenue generated by these 8 facilities represents 37% of our global revenue. Great Lakes water levels rise and fall on a cyclical basis over decades. Currently, they are at an all-time high, but were at record lows 20 years ago. DTE has adjusted to these cyclical fluctuations by incorporating measures, such as dredging of intakes during low water levels to counteract these changes.
26-50

Comment

All eight units (seven electric generating stations and one natural gas compressor station) that withdraw fresh water from the Michigan Great Lakes are located in the St. Lawrence watershed. This represents 62% of the 13 facilities included in this disclosure. A significant decrease in the water level within the watershed could put these facilities at risk of damage or losing production. The amount of generation or production capacity lost by a significant change in the water level within the watershed could range from 0% to 69% depending on the nature of the event or situation. For example, a significant drop in water level in the Great Lakes could result in the loss of cooling water, and therefore generation or production, at one or all the facilities. DTE's response would be to increase focus on diversifying its power generation fleet to reduce water reliance, and exploring alternative options for water supply. This percentage divides the power generation from the 8 facilities by the power generation from DTE's entire generation fleet, including renewable energy, natural gas, and hydroelectric power. The revenue generated by these 8 facilities represents 37% of our global revenue. Great Lakes water levels rise and fall on a cyclical basis over decades. Currently, they are at an all-time high, but were at record lows 20 years ago. DTE has adjusted to these cyclical fluctuations by incorporating measures, such as dredging of intakes during low water levels to counteract these changes.

W4.2

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

Country/Region

The cost of response is not quantified at the corporate level. DTE expects that the major costs would be related to updating infrastructure to account for new conditions. Increased engagement with policy makers would not have significant cost, but could be very effective in sharing best practices for the power generation industry and for working to reduce costs to our customers.
DTE would engage with public policy makers and would increase capital expenditure to address infrastructure inadequate for the new conditions. By updating infrastructure, the company can be better prepared to mitigate water risk as it pertains to electric production for customers. Engagement and response to changes in water availability is immediate. The timeframe to see consequences of climate change is unknown. Although water availability concern due to climate change is apparent in other parts of the U.S., we do not expect a large impact in the Great Lakes region and we do not expect a need for a response to this risk in the immediate future. Engaging with policy makers would strengthen our process of managing future impacts through identifying potential impacts, planning, and applying best practices.
Engage with regulators/policymakers
The financial impact has not been quantified financially. For DTE's operations, the major financial impact would be from the company's response to changing water levels at plant intakes and discharges.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Likely
Low
Unknown
Changing water levels could require restructuring of cooling water intake structures (CWIS) and plant discharge structures. Unpredictable variations in temperature and weather patterns because of climate change can adversely impact operations through alternating levels of precipitation and potential drought. Secondary impacts could include changes in financial distribution leading to monetary stressors on the organization through unintended remediation, process inefficiency, and unplanned outages. Great Lakes water levels rise and fall on a cyclical basis over decades. Currently, they are at an all-time high, but were at record lows 20 years ago. DTE has adjusted to these cyclical fluctuations by incorporating measures, such as dredging of intakes during low water levels to counteract these changes.
Increased capital costs
Other, please specify (Effects of climate change and drought)
Physical
St. Lawrence
United States of America

River basin

The cost of response is not quantified at the corporate level. DTE expects that the major costs would be related to updating infrastructure to account for new conditions. Increased engagement with policy makers would not have significant cost, but could be very effective in sharing best practices for the power generation industry and for working to reduce costs to our customers.
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Engage with regulators/policymakers
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<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Likely
Low
Unknown
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Increased capital costs
Other, please specify (Effects of climate change and drought)
Physical
St. Lawrence

Type of risk

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Engage with regulators/policymakers
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<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Likely
Low
Unknown
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Increased capital costs
Other, please specify (Effects of climate change and drought)
Physical

Primary risk driver

The cost of response is not quantified at the corporate level. DTE expects that the major costs would be related to updating infrastructure to account for new conditions. Increased engagement with policy makers would not have significant cost, but could be very effective in sharing best practices for the power generation industry and for working to reduce costs to our customers.
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Engage with regulators/policymakers
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<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Likely
Low
Unknown
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Increased capital costs
Other, please specify (Effects of climate change and drought)

Primary potential impact

The cost of response is not quantified at the corporate level. DTE expects that the major costs would be related to updating infrastructure to account for new conditions. Increased engagement with policy makers would not have significant cost, but could be very effective in sharing best practices for the power generation industry and for working to reduce costs to our customers.
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Engage with regulators/policymakers
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<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Likely
Low
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Increased capital costs

Company-specific description

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Engage with regulators/policymakers
The financial impact has not been quantified financially. For DTE's operations, the major financial impact would be from the company's response to changing water levels at plant intakes and discharges.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Likely
Low
Unknown
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Timeframe

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Engage with regulators/policymakers
The financial impact has not been quantified financially. For DTE's operations, the major financial impact would be from the company's response to changing water levels at plant intakes and discharges.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Likely
Low
Unknown

Magnitude of potential impact

The cost of response is not quantified at the corporate level. DTE expects that the major costs would be related to updating infrastructure to account for new conditions. Increased engagement with policy makers would not have significant cost, but could be very effective in sharing best practices for the power generation industry and for working to reduce costs to our customers.
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Engage with regulators/policymakers
The financial impact has not been quantified financially. For DTE's operations, the major financial impact would be from the company's response to changing water levels at plant intakes and discharges.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Likely

Low

Likelihood

The cost of response is not quantified at the corporate level. DTE expects that the major costs would be related to updating infrastructure to account for new conditions. Increased engagement with policy makers would not have significant cost, but could be very effective in sharing best practices for the power generation industry and for working to reduce costs to our customers.

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Engage with regulators/policymakers

The financial impact has not been quantified financially. For DTE's operations, the major financial impact would be from the company's response to changing water levels at plant intakes and discharges.

<Not Applicable>

<Not Applicable>

<Not Applicable>

No, we do not have this figure

Likely

Are you able to provide a potential financial impact figure?

The cost of response is not quantified at the corporate level. DTE expects that the major costs would be related to updating infrastructure to account for new conditions. Increased engagement with policy makers would not have significant cost, but could be very effective in sharing best practices for the power generation industry and for working to reduce costs to our customers.

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Engage with regulators/policymakers

The financial impact has not been quantified financially. For DTE's operations, the major financial impact would be from the company's response to changing water levels at plant intakes and discharges.

<Not Applicable>

<Not Applicable>

<Not Applicable>

No, we do not have this figure

Potential financial impact figure (currency)

The cost of response is not quantified at the corporate level. DTE expects that the major costs would be related to updating infrastructure to account for new conditions. Increased engagement with policy makers would not have significant cost, but could be very effective in sharing best practices for the power generation industry and for working to reduce costs to our customers.

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Engage with regulators/policymakers

The financial impact has not been quantified financially. For DTE's operations, the major financial impact would be from the company's response to changing water levels at plant intakes and discharges.

<Not Applicable>

<Not Applicable>

<Not Applicable>

Potential financial impact figure - minimum (currency)

The cost of response is not quantified at the corporate level. DTE expects that the major costs would be related to updating infrastructure to account for new conditions. Increased engagement with policy makers would not have significant cost, but could be very effective in sharing best practices for the power generation industry and for working to reduce costs to our customers.

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Engage with regulators/policymakers

The financial impact has not been quantified financially. For DTE's operations, the major financial impact would be from the company's response to changing water levels at plant intakes and discharges.

<Not Applicable>

<Not Applicable>

Potential financial impact figure - maximum (currency)

The cost of response is not quantified at the corporate level. DTE expects that the major costs would be related to updating infrastructure to account for new conditions. Increased engagement with policy makers would not have significant cost, but could be very effective in sharing best practices for the power generation industry and for working to reduce costs to our customers.

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Engage with regulators/policymakers

The financial impact has not been quantified financially. For DTE's operations, the major financial impact would be from the company's response to changing water levels at plant intakes and discharges.

<Not Applicable>

Explanation of financial impact

The cost of response is not quantified at the corporate level. DTE expects that the major costs would be related to updating infrastructure to account for new conditions. Increased engagement with policy makers would not have significant cost, but could be very effective in sharing best practices for the power generation industry and for working to reduce costs to our customers.
DTE would engage with public policy makers and would increase capital expenditure to address infrastructure inadequate for the new conditions. By updating infrastructure, the company can be better prepared to mitigate water risk as it pertains to electric production for customers. Engagement and response to changes in water availability is immediate. The timeframe to see consequences of climate change is unknown. Although water availability concern due to climate change is apparent in other parts of the U.S., we do not expect a large impact in the Great Lakes region and we do not expect a need for a response to this risk in the immediate future. Engaging with policy makers would strengthen our process of managing future impacts through identifying potential impacts, planning, and applying best practices.
Engage with regulators/policymakers
The financial impact has not been quantified financially. For DTE's operations, the major financial impact would be from the company's response to changing water levels at plant intakes and discharges.

Primary response to risk

The cost of response is not quantified at the corporate level. DTE expects that the major costs would be related to updating infrastructure to account for new conditions. Increased engagement with policy makers would not have significant cost, but could be very effective in sharing best practices for the power generation industry and for working to reduce costs to our customers.
DTE would engage with public policy makers and would increase capital expenditure to address infrastructure inadequate for the new conditions. By updating infrastructure, the company can be better prepared to mitigate water risk as it pertains to electric production for customers. Engagement and response to changes in water availability is immediate. The timeframe to see consequences of climate change is unknown. Although water availability concern due to climate change is apparent in other parts of the U.S., we do not expect a large impact in the Great Lakes region and we do not expect a need for a response to this risk in the immediate future. Engaging with policy makers would strengthen our process of managing future impacts through identifying potential impacts, planning, and applying best practices.
Engage with regulators/policymakers

Description of response

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Cost of response

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Explanation of cost of response

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Country/Region

This response is not quantified. Cost of negotiations would be minimal; however, major changes to infrastructure to meet regulatory requirements would require significant capital. Operating costs would increase as the company would endeavor to reduce water withdrawal magnitude and output.
The company would endeavor to negotiate favorable limits, but would ultimately comply with the regulatory requirements, which may result in increased operating costs.
Comply with local regulatory requirements
This impact has not been quantified financially.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Unlikely
Unknown
Unknown
The company may have to change its operations (e.g. reduce intake and output) in order to meet mandatory requirements. DTE is already in the process of transitioning from coal-fired generation to more generation from renewable sources and natural gas. As this transition occurs, water use will decrease, keeping in line with any potential water conservation measures in future.
Increased operating costs
Mandatory water efficiency, conservation, recycling or process standards
Regulatory
St. Lawrence
United States of America

River basin

This response is not quantified. Cost of negotiations would be minimal; however, major changes to infrastructure to meet regulatory requirements would require significant capital. Operating costs would increase as the company would endeavor to reduce water withdrawal magnitude and output.
The company would endeavor to negotiate favorable limits, but would ultimately comply with the regulatory requirements, which may result in increased operating costs.
Comply with local regulatory requirements
This impact has not been quantified financially.
<Not Applicable>
<Not Applicable>
<Not Applicable>
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Increased operating costs

Mandatory water efficiency, conservation, recycling or process standards
Regulatory
St. Lawrence

Type of risk

This response is not quantified. Cost of negotiations would be minimal; however, major changes to infrastructure to meet regulatory requirements would require significant capital. Operating costs would increase as the company would endeavor to reduce water withdrawal magnitude and output.
The company would endeavor to negotiate favorable limits, but would ultimately comply with the regulatory requirements, which may result in increased operating costs.
Comply with local regulatory requirements
This impact has not been quantified financially.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Unlikely
Unknown
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Increased operating costs
Mandatory water efficiency, conservation, recycling or process standards
Regulatory

Primary risk driver

This response is not quantified. Cost of negotiations would be minimal; however, major changes to infrastructure to meet regulatory requirements would require significant capital. Operating costs would increase as the company would endeavor to reduce water withdrawal magnitude and output.
The company would endeavor to negotiate favorable limits, but would ultimately comply with the regulatory requirements, which may result in increased operating costs.
Comply with local regulatory requirements
This impact has not been quantified financially.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Unlikely
Unknown
Unknown
The company may have to change its operations (e.g. reduce intake and output) in order to meet mandatory requirements. DTE is already in the process of transitioning from coal-fired generation to more generation from renewable sources and natural gas. As this transition occurs, water use will decrease, keeping in line with any potential water conservation measures in future.
Increased operating costs
Mandatory water efficiency, conservation, recycling or process standards

Primary potential impact

This response is not quantified. Cost of negotiations would be minimal; however, major changes to infrastructure to meet regulatory requirements would require significant capital. Operating costs would increase as the company would endeavor to reduce water withdrawal magnitude and output.
The company would endeavor to negotiate favorable limits, but would ultimately comply with the regulatory requirements, which may result in increased operating costs.
Comply with local regulatory requirements
This impact has not been quantified financially.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Unlikely
Unknown
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Increased operating costs

Company-specific description

This response is not quantified. Cost of negotiations would be minimal; however, major changes to infrastructure to meet regulatory requirements would require significant capital. Operating costs would increase as the company would endeavor to reduce water withdrawal magnitude and output.
The company would endeavor to negotiate favorable limits, but would ultimately comply with the regulatory requirements, which may result in increased operating costs.
Comply with local regulatory requirements
This impact has not been quantified financially.
<Not Applicable>
<Not Applicable>
<Not Applicable>
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Unlikely
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Timeframe

This response is not quantified. Cost of negotiations would be minimal; however, major changes to infrastructure to meet regulatory requirements would require significant capital. Operating costs would increase as the company would endeavor to reduce water withdrawal magnitude and output.
The company would endeavor to negotiate favorable limits, but would ultimately comply with the regulatory requirements, which may result in increased operating costs.
Comply with local regulatory requirements

This impact has not been quantified financially.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Unlikely
Unknown
Unknown

Magnitude of potential impact

This response is not quantified. Cost of negotiations would be minimal; however, major changes to infrastructure to meet regulatory requirements would require significant capital. Operating costs would increase as the company would endeavor to reduce water withdrawal magnitude and output.
The company would endeavor to negotiate favorable limits, but would ultimately comply with the regulatory requirements, which may result in increased operating costs.
Comply with local regulatory requirements
This impact has not been quantified financially.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Unlikely
Unknown

Likelihood

This response is not quantified. Cost of negotiations would be minimal; however, major changes to infrastructure to meet regulatory requirements would require significant capital. Operating costs would increase as the company would endeavor to reduce water withdrawal magnitude and output.
The company would endeavor to negotiate favorable limits, but would ultimately comply with the regulatory requirements, which may result in increased operating costs.
Comply with local regulatory requirements
This impact has not been quantified financially.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Unlikely

Are you able to provide a potential financial impact figure?

This response is not quantified. Cost of negotiations would be minimal; however, major changes to infrastructure to meet regulatory requirements would require significant capital. Operating costs would increase as the company would endeavor to reduce water withdrawal magnitude and output.
The company would endeavor to negotiate favorable limits, but would ultimately comply with the regulatory requirements, which may result in increased operating costs.
Comply with local regulatory requirements
This impact has not been quantified financially.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure

Potential financial impact figure (currency)

This response is not quantified. Cost of negotiations would be minimal; however, major changes to infrastructure to meet regulatory requirements would require significant capital. Operating costs would increase as the company would endeavor to reduce water withdrawal magnitude and output.
The company would endeavor to negotiate favorable limits, but would ultimately comply with the regulatory requirements, which may result in increased operating costs.
Comply with local regulatory requirements
This impact has not been quantified financially.
<Not Applicable>
<Not Applicable>
<Not Applicable>

Potential financial impact figure - minimum (currency)

This response is not quantified. Cost of negotiations would be minimal; however, major changes to infrastructure to meet regulatory requirements would require significant capital. Operating costs would increase as the company would endeavor to reduce water withdrawal magnitude and output.
The company would endeavor to negotiate favorable limits, but would ultimately comply with the regulatory requirements, which may result in increased operating costs.
Comply with local regulatory requirements
This impact has not been quantified financially.
<Not Applicable>
<Not Applicable>

Potential financial impact figure - maximum (currency)

This response is not quantified. Cost of negotiations would be minimal; however, major changes to infrastructure to meet regulatory requirements would require significant capital. Operating costs would increase as the company would endeavor to reduce water withdrawal magnitude and output.
The company would endeavor to negotiate favorable limits, but would ultimately comply with the regulatory requirements, which may result in increased operating costs.
Comply with local regulatory requirements
This impact has not been quantified financially.
<Not Applicable>

Explanation of financial impact

This response is not quantified. Cost of negotiations would be minimal; however, major changes to infrastructure to meet regulatory requirements would require significant capital. Operating costs would increase as the company would endeavor to reduce water withdrawal magnitude and output.
The company would endeavor to negotiate favorable limits, but would ultimately comply with the regulatory requirements, which may result in increased operating costs.
Comply with local regulatory requirements
This impact has not been quantified financially.

Primary response to risk

This response is not quantified. Cost of negotiations would be minimal; however, major changes to infrastructure to meet regulatory requirements would require significant capital. Operating costs would increase as the company would endeavor to reduce water withdrawal magnitude and output.
The company would endeavor to negotiate favorable limits, but would ultimately comply with the regulatory requirements, which may result in increased operating costs.
Comply with local regulatory requirements

Description of response

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Cost of response

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Explanation of cost of response

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Country/Region

The company has evaluated the impact of the CCR rules and is in the process of coming into compliance. Strategies to address the revised 316(b) rules and the revised ELGs are underway. The financial impact for the CCR rule has not been quantified for water-related expenses. It is estimated that capital expenses associated with ELG and 316(b) compliance will be 6.1 million for 2019, and will increase further in 2020 and beyond. Increased expenditure to explore new technologies is the main cost associated with this response, which may be substantial as DTE implements these technologies to comply with regulations.
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The company has engaged with public policy makers, has engaged with suppliers to evaluate new technologies, increased capital expenditure, and increased investment in new technology to be able to comply with the regulatory requirements.
Comply with local regulatory requirements
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<Not Applicable>
<Not Applicable>
6100000
Yes, a single figure estimate
Virtually certain
High
1 - 3 years
Clean Water Act regulations related to 316(b) for cooling water intake structures, and effluent limitation guidelines (ELG) for wastewater discharges, will require substantive physical and operational changes at our steam electric generating stations. In addition, the revised coal combustion residuals (CCR) rule requires extensive changes to wastewater systems at some of our facilities.
Increased compliance costs
Regulation of discharge quality/volumes
Regulatory
St. Lawrence
United States of America

River basin

The company has evaluated the impact of the CCR rules and is in the process of coming into compliance. Strategies to address the revised 316(b) rules and the revised ELGs are underway. The financial impact for the CCR rule has not been quantified for water-related expenses. It is estimated that capital expenses associated with ELG and 316(b) compliance will be 6.1 million for 2019, and will increase further in 2020 and beyond. Increased expenditure to explore new technologies is the main cost associated with this response, which may be substantial as DTE implements these technologies to comply with regulations.
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Increased compliance costs
Regulation of discharge quality/volumes
Regulatory
St. Lawrence

Type of risk

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Increased compliance costs
Regulation of discharge quality/volumes
Regulatory

Primary risk driver

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Increased compliance costs
Regulation of discharge quality/volumes

Primary potential impact

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Yes, a single figure estimate
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Increased compliance costs

Company-specific description

The company has evaluated the impact of the CCR rules and is in the process of coming into compliance. Strategies to address the revised 316(b) rules and the revised ELGs are underway. The financial impact for the CCR rule has not been quantified for water-related expenses. It is estimated that capital expenses associated with ELG and 316(b) compliance will be 6.1 million for 2019, and will increase further in 2020 and beyond. Increased expenditure to explore new technologies is the main cost associated with this response, which may be substantial as DTE implements these technologies to comply with regulations.
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Timeframe

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The company has engaged with public policy makers, has engaged with suppliers to evaluate new technologies, increased capital expenditure, and increased investment in new technology to be able to comply with the regulatory requirements.
Comply with local regulatory requirements
It is estimated that capital expenses associated with ELG and 316(b) compliance will be 6.1 million for 2019, and will increase further in 2020 and beyond. The financial impact for the CCR rule has not been quantified for water-related expenses.
<Not Applicable>
<Not Applicable>
6100000
Yes, a single figure estimate
Virtually certain
High
1 - 3 years

Magnitude of potential impact
The company has evaluated the impact of the CCR rules and is in the process of coming into compliance. Strategies to address the revised 316(b) rules and the revised ELGs are underway. The financial impact for the CCR rule has not been quantified for water-related expenses. It is estimated that capital expenses associated with ELG and 316(b) compliance will be 6.1 million for 2019, and will increase further in 2020 and beyond. Increased expenditure to explore new technologies is the main cost associated with this response, which may be substantial as DTE implements these technologies to comply with regulations.
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Comply with local regulatory requirements
It is estimated that capital expenses associated with ELG and 316(b) compliance will be 6.1 million for 2019, and will increase further in 2020 and beyond. The financial impact for the CCR rule has not been quantified for water-related expenses.
<Not Applicable>
<Not Applicable>
6100000
Yes, a single figure estimate
Virtually certain
High

Likelihood
The company has evaluated the impact of the CCR rules and is in the process of coming into compliance. Strategies to address the revised 316(b) rules and the revised ELGs are underway. The financial impact for the CCR rule has not been quantified for water-related expenses. It is estimated that capital expenses associated with ELG and 316(b) compliance will be 6.1 million for 2019, and will increase further in 2020 and beyond. Increased expenditure to explore new technologies is the main cost associated with this response, which may be substantial as DTE implements these technologies to comply with regulations.
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<Not Applicable>
<Not Applicable>
6100000
Yes, a single figure estimate
Virtually certain

Are you able to provide a potential financial impact figure?
The company has evaluated the impact of the CCR rules and is in the process of coming into compliance. Strategies to address the revised 316(b) rules and the revised ELGs are underway. The financial impact for the CCR rule has not been quantified for water-related expenses. It is estimated that capital expenses associated with ELG and 316(b) compliance will be 6.1 million for 2019, and will increase further in 2020 and beyond. Increased expenditure to explore new technologies is the main cost associated with this response, which may be substantial as DTE implements these technologies to comply with regulations.
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Comply with local regulatory requirements
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<Not Applicable>
<Not Applicable>
6100000
Yes, a single figure estimate

Potential financial impact figure (currency)
The company has evaluated the impact of the CCR rules and is in the process of coming into compliance. Strategies to address the revised 316(b) rules and the revised ELGs are underway. The financial impact for the CCR rule has not been quantified for water-related expenses. It is estimated that capital expenses associated with ELG and 316(b) compliance will be 6.1 million for 2019, and will increase further in 2020 and beyond. Increased expenditure to explore new technologies is the main cost associated with this response, which may be substantial as DTE implements these technologies to comply with regulations.
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Comply with local regulatory requirements
It is estimated that capital expenses associated with ELG and 316(b) compliance will be 6.1 million for 2019, and will increase further in 2020 and beyond. The financial impact for the CCR rule has not been quantified for water-related expenses.
<Not Applicable>
<Not Applicable>
6100000

Potential financial impact figure - minimum (currency)
The company has evaluated the impact of the CCR rules and is in the process of coming into compliance. Strategies to address the revised 316(b) rules and the revised

ELGs are underway. The financial impact for the CCR rule has not been quantified for water-related expenses. It is estimated that capital expenses associated with ELG and 316(b) compliance will be 6.1 million for 2019, and will increase further in 2020 and beyond. Increased expenditure to explore new technologies is the main cost associated with this response, which may be substantial as DTE implements these technologies to comply with regulations.
6100000
The company has engaged with public policy makers, has engaged with suppliers to evaluate new technologies, increased capital expenditure, and increased investment in new technology to be able to comply with the regulatory requirements.
Comply with local regulatory requirements
It is estimated that capital expenses associated with ELG and 316(b) compliance will be 6.1 million for 2019, and will increase further in 2020 and beyond. The financial impact for the CCR rule has not been quantified for water-related expenses.
<Not Applicable>
<Not Applicable>

Potential financial impact figure - maximum (currency)
The company has evaluated the impact of the CCR rules and is in the process of coming into compliance. Strategies to address the revised 316(b) rules and the revised ELGs are underway. The financial impact for the CCR rule has not been quantified for water-related expenses. It is estimated that capital expenses associated with ELG and 316(b) compliance will be 6.1 million for 2019, and will increase further in 2020 and beyond. Increased expenditure to explore new technologies is the main cost associated with this response, which may be substantial as DTE implements these technologies to comply with regulations.
6100000
The company has engaged with public policy makers, has engaged with suppliers to evaluate new technologies, increased capital expenditure, and increased investment in new technology to be able to comply with the regulatory requirements.
Comply with local regulatory requirements
It is estimated that capital expenses associated with ELG and 316(b) compliance will be 6.1 million for 2019, and will increase further in 2020 and beyond. The financial impact for the CCR rule has not been quantified for water-related expenses.
<Not Applicable>

Explanation of financial impact
The company has evaluated the impact of the CCR rules and is in the process of coming into compliance. Strategies to address the revised 316(b) rules and the revised ELGs are underway. The financial impact for the CCR rule has not been quantified for water-related expenses. It is estimated that capital expenses associated with ELG and 316(b) compliance will be 6.1 million for 2019, and will increase further in 2020 and beyond. Increased expenditure to explore new technologies is the main cost associated with this response, which may be substantial as DTE implements these technologies to comply with regulations.
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The company has engaged with public policy makers, has engaged with suppliers to evaluate new technologies, increased capital expenditure, and increased investment in new technology to be able to comply with the regulatory requirements.
Comply with local regulatory requirements
It is estimated that capital expenses associated with ELG and 316(b) compliance will be 6.1 million for 2019, and will increase further in 2020 and beyond. The financial impact for the CCR rule has not been quantified for water-related expenses.

Primary response to risk
The company has evaluated the impact of the CCR rules and is in the process of coming into compliance. Strategies to address the revised 316(b) rules and the revised ELGs are underway. The financial impact for the CCR rule has not been quantified for water-related expenses. It is estimated that capital expenses associated with ELG and 316(b) compliance will be 6.1 million for 2019, and will increase further in 2020 and beyond. Increased expenditure to explore new technologies is the main cost associated with this response, which may be substantial as DTE implements these technologies to comply with regulations.
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The company has engaged with public policy makers, has engaged with suppliers to evaluate new technologies, increased capital expenditure, and increased investment in new technology to be able to comply with the regulatory requirements.
Comply with local regulatory requirements

Description of response
The company has evaluated the impact of the CCR rules and is in the process of coming into compliance. Strategies to address the revised 316(b) rules and the revised ELGs are underway. The financial impact for the CCR rule has not been quantified for water-related expenses. It is estimated that capital expenses associated with ELG and 316(b) compliance will be 6.1 million for 2019, and will increase further in 2020 and beyond. Increased expenditure to explore new technologies is the main cost associated with this response, which may be substantial as DTE implements these technologies to comply with regulations.
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The company has engaged with public policy makers, has engaged with suppliers to evaluate new technologies, increased capital expenditure, and increased investment in new technology to be able to comply with the regulatory requirements.

Cost of response
The company has evaluated the impact of the CCR rules and is in the process of coming into compliance. Strategies to address the revised 316(b) rules and the revised ELGs are underway. The financial impact for the CCR rule has not been quantified for water-related expenses. It is estimated that capital expenses associated with ELG and 316(b) compliance will be 6.1 million for 2019, and will increase further in 2020 and beyond. Increased expenditure to explore new technologies is the main cost associated with this response, which may be substantial as DTE implements these technologies to comply with regulations.
6100000

Explanation of cost of response
The company has evaluated the impact of the CCR rules and is in the process of coming into compliance. Strategies to address the revised 316(b) rules and the revised ELGs are underway. The financial impact for the CCR rule has not been quantified for water-related expenses. It is estimated that capital expenses associated with ELG and 316(b) compliance will be 6.1 million for 2019, and will increase further in 2020 and beyond. Increased expenditure to explore new technologies is the main cost associated with this response, which may be substantial as DTE implements these technologies to comply with regulations.

Country/Region
Complying with regulatory requirements would include rethinking current processes to reduce water withdrawal, and implementing those solutions. The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes. Additionally, if DTE were to supplement surface water withdrawals with withdrawals from municipal sources, this would also increase costs.
DTE foresees this as a potential future risk, but does not consider it an immediate risk at this time. The company would endeavor to negotiate favorable limits/allocation, but would ultimately comply with the regulatory requirements, which may result in increased operating costs.
Comply with local regulatory requirements
Although a specific financial impact figure is unknown, DTE expects that the greatest financial impact would be related to rethinking, redesigning, and implementing power generating processes to minimize the use of water (i.e., DTE's response to the risk). Further financial impact would result from supplementing surface water withdrawals with withdrawals from municipal sources. Direct financial impact because of permit obtainment difficulties is not anticipated.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure

Unlikely
Unknown
Unknown
The company may have to change its operations (e.g. reduce water withdrawal) in order to meet revised limits to water withdrawal.
Increased operating costs
Increased difficulty in obtaining withdrawals/operations permit
Regulatory
St. Lawrence
United States of America

River basin

Complying with regulatory requirements would include rethinking current processes to reduce water withdrawal, and implementing those solutions. The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes. Additionally, if DTE were to supplement surface water withdrawals with withdrawals from municipal sources, this would also increase costs.
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<Not Applicable>
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Increased operating costs
Increased difficulty in obtaining withdrawals/operations permit
Regulatory
St. Lawrence

Type of risk

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<Not Applicable>
<Not Applicable>
No, we do not have this figure
Unlikely
Unknown
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The company may have to change its operations (e.g. reduce water withdrawal) in order to meet revised limits to water withdrawal.
Increased operating costs
Increased difficulty in obtaining withdrawals/operations permit
Regulatory

Primary risk driver

Complying with regulatory requirements would include rethinking current processes to reduce water withdrawal, and implementing those solutions. The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes. Additionally, if DTE were to supplement surface water withdrawals with withdrawals from municipal sources, this would also increase costs.
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<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Unlikely
Unknown
Unknown
The company may have to change its operations (e.g. reduce water withdrawal) in order to meet revised limits to water withdrawal.
Increased operating costs
Increased difficulty in obtaining withdrawals/operations permit

Primary potential impact

Complying with regulatory requirements would include rethinking current processes to reduce water withdrawal, and implementing those solutions. The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes. Additionally, if DTE were to supplement surface water withdrawals with withdrawals from municipal sources, this would also increase costs.
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<Not Applicable>
<Not Applicable>
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Increased operating costs

Company-specific description

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<Not Applicable>
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Timeframe

Complying with regulatory requirements would include rethinking current processes to reduce water withdrawal, and implementing those solutions. The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes. Additionally, if DTE were to supplement surface water withdrawals with withdrawals from municipal sources, this would also increase costs.
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<Not Applicable>
<Not Applicable>
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Unlikely
Unknown
Unknown

Magnitude of potential impact

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<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Unlikely
Unknown

Likelihood

Complying with regulatory requirements would include rethinking current processes to reduce water withdrawal, and implementing those solutions. The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes. Additionally, if DTE were to supplement surface water withdrawals with withdrawals from municipal sources, this would also increase costs.
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<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure

Unlikely

Are you able to provide a potential financial impact figure?

Complying with regulatory requirements would include rethinking current processes to reduce water withdrawal, and implementing those solutions. The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes. Additionally, if DTE were to supplement surface water withdrawals with withdrawals from municipal sources, this would also increase costs.
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<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure

Potential financial impact figure (currency)

Complying with regulatory requirements would include rethinking current processes to reduce water withdrawal, and implementing those solutions. The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes. Additionally, if DTE were to supplement surface water withdrawals with withdrawals from municipal sources, this would also increase costs.
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<Not Applicable>
<Not Applicable>
<Not Applicable>

Potential financial impact figure - minimum (currency)

Complying with regulatory requirements would include rethinking current processes to reduce water withdrawal, and implementing those solutions. The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes. Additionally, if DTE were to supplement surface water withdrawals with withdrawals from municipal sources, this would also increase costs.
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Comply with local regulatory requirements
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<Not Applicable>
<Not Applicable>

Potential financial impact figure - maximum (currency)

Complying with regulatory requirements would include rethinking current processes to reduce water withdrawal, and implementing those solutions. The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes. Additionally, if DTE were to supplement surface water withdrawals with withdrawals from municipal sources, this would also increase costs.
DTE foresees this as a potential future risk, but does not consider it an immediate risk at this time. The company would endeavor to negotiate favorable limits/allocation, but would ultimately comply with the regulatory requirements, which may result in increased operating costs.
Comply with local regulatory requirements
Although a specific financial impact figure is unknown, DTE expects that the greatest financial impact would be related to rethinking, redesigning, and implementing power generating processes to minimize the use of water (i.e., DTE's response to the risk). Further financial impact would result from supplementing surface water withdrawals with withdrawals from municipal sources. Direct financial impact because of permit obtainment difficulties is not anticipated.
<Not Applicable>

Explanation of financial impact

Complying with regulatory requirements would include rethinking current processes to reduce water withdrawal, and implementing those solutions. The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes. Additionally, if DTE were to supplement surface water withdrawals with withdrawals from municipal sources, this would also increase costs.
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Primary response to risk

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Comply with local regulatory requirements

Description of response

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Cost of response

Complying with regulatory requirements would include rethinking current processes to reduce water withdrawal, and implementing those solutions. The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes. Additionally, if DTE were to supplement surface water withdrawals with withdrawals from municipal sources, this would also increase costs.

Explanation of cost of response

Complying with regulatory requirements would include rethinking current processes to reduce water withdrawal, and implementing those solutions. The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes. Additionally, if DTE were to supplement surface water withdrawals with withdrawals from municipal sources, this would also increase costs.

Country/Region

Cost of response not quantified at corporate level.
In response to a noncompliance due to flooding, the Company notifies the state and emergency response management while coordinating with contractors to remediate any impact. Flooding can result in process inefficiency, infrastructure damage, and unplanned outages, which could disrupt production capacity.
Develop flood emergency plans
This impact has not been quantified financially.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Likely
Low
Unknown
Changing water levels could require restructuring of cooling water intake structures (CWIS) and plant discharge structures. Unpredictable variations in temperature and weather patterns because of climate change can adversely impact operations through alternating levels of precipitation and potential flooding. Secondary impacts could include changes in financial distribution leading to monetary stressors on the organization through unintended remediation, process inefficiency, and unplanned outages. Great Lakes water levels rise and fall on a cyclical basis over decades. Currently, they are at an all-time high, but were at record lows 20 years ago. DTE has planned for these cyclical fluctuations in its operations.
Reduction or disruption in production capacity
Flooding
Physical
St. Lawrence
United States of America

River basin

Cost of response not quantified at corporate level.
In response to a noncompliance due to flooding, the Company notifies the state and emergency response management while coordinating with contractors to remediate any impact. Flooding can result in process inefficiency, infrastructure damage, and unplanned outages, which could disrupt production capacity.
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<Not Applicable>
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Reduction or disruption in production capacity
Flooding
Physical
St. Lawrence

Type of risk

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Reduction or disruption in production capacity
Flooding
Physical

Primary risk driver

Cost of response not quantified at corporate level.
In response to a noncompliance due to flooding, the Company notifies the state and emergency response management while coordinating with contractors to remediate any impact. Flooding can result in process inefficiency, infrastructure damage, and unplanned outages, which could disrupt production capacity.
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Reduction or disruption in production capacity
Flooding

Primary potential impact

Cost of response not quantified at corporate level.
In response to a noncompliance due to flooding, the Company notifies the state and emergency response management while coordinating with contractors to remediate any impact. Flooding can result in process inefficiency, infrastructure damage, and unplanned outages, which could disrupt production capacity.
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Reduction or disruption in production capacity

Company-specific description

Cost of response not quantified at corporate level.
In response to a noncompliance due to flooding, the Company notifies the state and emergency response management while coordinating with contractors to remediate any impact. Flooding can result in process inefficiency, infrastructure damage, and unplanned outages, which could disrupt production capacity.
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Timeframe

Cost of response not quantified at corporate level.
In response to a noncompliance due to flooding, the Company notifies the state and emergency response management while coordinating with contractors to remediate any impact. Flooding can result in process inefficiency, infrastructure damage, and unplanned outages, which could disrupt production capacity.
Develop flood emergency plans
This impact has not been quantified financially.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Likely
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Unknown

Magnitude of potential impact

Cost of response not quantified at corporate level.
In response to a noncompliance due to flooding, the Company notifies the state and emergency response management while coordinating with contractors to remediate any impact. Flooding can result in process inefficiency, infrastructure damage, and unplanned outages, which could disrupt production capacity.
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No, we do not have this figure
Likely
Low

Likelihood

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<Not Applicable>
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Likely

Are you able to provide a potential financial impact figure?

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<Not Applicable>
No, we do not have this figure

Potential financial impact figure (currency)

Cost of response not quantified at corporate level.
In response to a noncompliance due to flooding, the Company notifies the state and emergency response management while coordinating with contractors to remediate any impact. Flooding can result in process inefficiency, infrastructure damage, and unplanned outages, which could disrupt production capacity.
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Potential financial impact figure - minimum (currency)

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Potential financial impact figure - maximum (currency)

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Explanation of financial impact

Cost of response not quantified at corporate level.
In response to a noncompliance due to flooding, the Company notifies the state and emergency response management while coordinating with contractors to remediate any impact. Flooding can result in process inefficiency, infrastructure damage, and unplanned outages, which could disrupt production capacity.
Develop flood emergency plans
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Primary response to risk

Cost of response not quantified at corporate level.
In response to a noncompliance due to flooding, the Company notifies the state and emergency response management while coordinating with contractors to remediate any impact. Flooding can result in process inefficiency, infrastructure damage, and unplanned outages, which could disrupt production capacity.
Develop flood emergency plans

Description of response

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Cost of response

Cost of response not quantified at corporate level.

Explanation of cost of response

Cost of response not quantified at corporate level.

Country/Region

The cost of response is not quantified at corporate level; however, DTE expects that the implementation of upgraded/new technologies will be the main cost associated with this risk.
The Company conducts studies that monitor the impact of operations on aquatic species and uses this data to inform its decisions.
Other, please specify (Conduct studies monitoring impact on aquatic ecosystem)
The cost of response is not quantified at corporate level; however, DTE expects that the implementation of upgraded/new technologies will be the main cost associated with this risk.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure

Unlikely
Low
Unknown
DTE considers ecosystem vulnerability a risk to disruption of production capacity. For example, at the Trenton Channel Power Plant, water temperature of discharged waters is a concern as it relates to aquatic life. This risk is mitigated through NPDES permit obligations by monitoring and reporting for water temperature.
Reduction or disruption in production capacity
Ecosystem vulnerability
Physical
St. Lawrence
United States of America

River basin

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Reduction or disruption in production capacity
Ecosystem vulnerability
Physical
St. Lawrence

Type of risk

The cost of response is not quantified at corporate level; however, DTE expects that the implementation of upgraded/new technologies will be the main cost associated with this risk.
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Reduction or disruption in production capacity
Ecosystem vulnerability
Physical

Primary risk driver

The cost of response is not quantified at corporate level; however, DTE expects that the implementation of upgraded/new technologies will be the main cost associated with this risk.
The Company conducts studies that monitor the impact of operations on aquatic species and uses this data to inform its decisions.
Other, please specify (Conduct studies monitoring impact on aquatic ecosystem)
The cost of response is not quantified at corporate level; however, DTE expects that the implementation of upgraded/new technologies will be the main cost associated with this risk.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Unlikely
Low
Unknown
DTE considers ecosystem vulnerability a risk to disruption of production capacity. For example, at the Trenton Channel Power Plant, water temperature of discharged waters is a concern as it relates to aquatic life. This risk is mitigated through NPDES permit obligations by monitoring and reporting for water temperature.
Reduction or disruption in production capacity
Ecosystem vulnerability

Primary potential impact

The cost of response is not quantified at corporate level; however, DTE expects that the implementation of upgraded/new technologies will be the main cost associated with this risk.
The Company conducts studies that monitor the impact of operations on aquatic species and uses this data to inform its decisions.
Other, please specify (Conduct studies monitoring impact on aquatic ecosystem)
The cost of response is not quantified at corporate level; however, DTE expects that the implementation of upgraded/new technologies will be the main cost associated with this risk.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure

Unlikely
Low
Unknown
DTE considers ecosystem vulnerability a risk to disruption of production capacity. For example, at the Trenton Channel Power Plant, water temperature of discharged waters is a concern as it relates to aquatic life. This risk is mitigated through NPDES permit obligations by monitoring and reporting for water temperature.
Reduction or disruption in production capacity

Company-specific description

The cost of response is not quantified at corporate level; however, DTE expects that the implementation of upgraded/new technologies will be the main cost associated with this risk.
The Company conducts studies that monitor the impact of operations on aquatic species and uses this data to inform its decisions.
Other, please specify (Conduct studies monitoring impact on aquatic ecosystem)
The cost of response is not quantified at corporate level; however, DTE expects that the implementation of upgraded/new technologies will be the main cost associated with this risk.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Unlikely
Low
Unknown
DTE considers ecosystem vulnerability a risk to disruption of production capacity. For example, at the Trenton Channel Power Plant, water temperature of discharged waters is a concern as it relates to aquatic life. This risk is mitigated through NPDES permit obligations by monitoring and reporting for water temperature.

Timeframe

The cost of response is not quantified at corporate level; however, DTE expects that the implementation of upgraded/new technologies will be the main cost associated with this risk.
The Company conducts studies that monitor the impact of operations on aquatic species and uses this data to inform its decisions.
Other, please specify (Conduct studies monitoring impact on aquatic ecosystem)
The cost of response is not quantified at corporate level; however, DTE expects that the implementation of upgraded/new technologies will be the main cost associated with this risk.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Unlikely
Low
Unknown

Magnitude of potential impact

The cost of response is not quantified at corporate level; however, DTE expects that the implementation of upgraded/new technologies will be the main cost associated with this risk.
The Company conducts studies that monitor the impact of operations on aquatic species and uses this data to inform its decisions.
Other, please specify (Conduct studies monitoring impact on aquatic ecosystem)
The cost of response is not quantified at corporate level; however, DTE expects that the implementation of upgraded/new technologies will be the main cost associated with this risk.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Unlikely
Low

Likelihood

The cost of response is not quantified at corporate level; however, DTE expects that the implementation of upgraded/new technologies will be the main cost associated with this risk.
The Company conducts studies that monitor the impact of operations on aquatic species and uses this data to inform its decisions.
Other, please specify (Conduct studies monitoring impact on aquatic ecosystem)
The cost of response is not quantified at corporate level; however, DTE expects that the implementation of upgraded/new technologies will be the main cost associated with this risk.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Unlikely

Are you able to provide a potential financial impact figure?

The cost of response is not quantified at corporate level; however, DTE expects that the implementation of upgraded/new technologies will be the main cost associated with this risk.
The Company conducts studies that monitor the impact of operations on aquatic species and uses this data to inform its decisions.
Other, please specify (Conduct studies monitoring impact on aquatic ecosystem)
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<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure

Potential financial impact figure (currency)

The cost of response is not quantified at corporate level; however, DTE expects that the implementation of upgraded/new technologies will be the main cost associated with this risk.
The Company conducts studies that monitor the impact of operations on aquatic species and uses this data to inform its decisions.
Other, please specify (Conduct studies monitoring impact on aquatic ecosystem)

The cost of response is not quantified at corporate level; however, DTE expects that the implementation of upgraded/new technologies will be the main cost associated with this risk.
<Not Applicable>
<Not Applicable>
<Not Applicable>

Potential financial impact figure - minimum (currency)
The cost of response is not quantified at corporate level; however, DTE expects that the implementation of upgraded/new technologies will be the main cost associated with this risk.
The Company conducts studies that monitor the impact of operations on aquatic species and uses this data to inform its decisions.
Other, please specify (Conduct studies monitoring impact on aquatic ecosystem)
The cost of response is not quantified at corporate level; however, DTE expects that the implementation of upgraded/new technologies will be the main cost associated with this risk.
<Not Applicable>
<Not Applicable>

Potential financial impact figure - maximum (currency)
The cost of response is not quantified at corporate level; however, DTE expects that the implementation of upgraded/new technologies will be the main cost associated with this risk.
The Company conducts studies that monitor the impact of operations on aquatic species and uses this data to inform its decisions.
Other, please specify (Conduct studies monitoring impact on aquatic ecosystem)
The cost of response is not quantified at corporate level; however, DTE expects that the implementation of upgraded/new technologies will be the main cost associated with this risk.
<Not Applicable>

Explanation of financial impact
The cost of response is not quantified at corporate level; however, DTE expects that the implementation of upgraded/new technologies will be the main cost associated with this risk.
The Company conducts studies that monitor the impact of operations on aquatic species and uses this data to inform its decisions.
Other, please specify (Conduct studies monitoring impact on aquatic ecosystem)
The cost of response is not quantified at corporate level; however, DTE expects that the implementation of upgraded/new technologies will be the main cost associated with this risk.

Primary response to risk
The cost of response is not quantified at corporate level; however, DTE expects that the implementation of upgraded/new technologies will be the main cost associated with this risk.
The Company conducts studies that monitor the impact of operations on aquatic species and uses this data to inform its decisions.
Other, please specify (Conduct studies monitoring impact on aquatic ecosystem)

Description of response
The cost of response is not quantified at corporate level; however, DTE expects that the implementation of upgraded/new technologies will be the main cost associated with this risk.
The Company conducts studies that monitor the impact of operations on aquatic species and uses this data to inform its decisions.

Cost of response
The cost of response is not quantified at corporate level; however, DTE expects that the implementation of upgraded/new technologies will be the main cost associated with this risk.

Explanation of cost of response
The cost of response is not quantified at corporate level; however, DTE expects that the implementation of upgraded/new technologies will be the main cost associated with this risk.

W4.2a

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

Country/Region
The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
DTE does not foresee water scarcity as an anticipated risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power generation operations. For example, further investment in renewable energy sources would reduce reliance on coal, as well as the risk of water scarcity as it affects our supply chain.
Promote investment in infrastructure and technologies for water saving, re-use and recycling among suppliers
Although a specific financial impact figure is unknown, DTE expects that the greatest financial impact would be related to rethinking, redesigning, and implementing power generating processes to minimize reliance on fuel sources affected by water scarcity. DTE expects that costs for fuel in this instance would increase, creating further financial impact.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Unlikely
Medium
Unknown
Water scarcity would contribute to a potential decrease in fuel supply (e.g., from coal mining or natural gas production) required for power generation. This decrease would disrupt DTE’s supply chain.
Supply chain disruption
Increased water scarcity
Physical
Supply chain
St. Lawrence
United States of America

River basin

The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
DTE does not foresee water scarcity as an anticipated risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power generation operations. For example, further investment in renewable energy sources would reduce reliance on coal, as well as the risk of water scarcity as it affects our supply chain.
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<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Unlikely
Medium
Unknown
Water scarcity would contribute to a potential decrease in fuel supply (e.g., from coal mining or natural gas production) required for power generation. This decrease would disrupt DTE's supply chain.
Supply chain disruption
Increased water scarcity
Physical
Supply chain
St. Lawrence

Stage of value chain

The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
DTE does not foresee water scarcity as an anticipated risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power generation operations. For example, further investment in renewable energy sources would reduce reliance on coal, as well as the risk of water scarcity as it affects our supply chain.
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<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Unlikely
Medium
Unknown
Water scarcity would contribute to a potential decrease in fuel supply (e.g., from coal mining or natural gas production) required for power generation. This decrease would disrupt DTE's supply chain.
Supply chain disruption
Increased water scarcity
Physical
Supply chain

Type of risk

The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
DTE does not foresee water scarcity as an anticipated risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power generation operations. For example, further investment in renewable energy sources would reduce reliance on coal, as well as the risk of water scarcity as it affects our supply chain.
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<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Unlikely
Medium
Unknown
Water scarcity would contribute to a potential decrease in fuel supply (e.g., from coal mining or natural gas production) required for power generation. This decrease would disrupt DTE's supply chain.
Supply chain disruption
Increased water scarcity
Physical

Primary risk driver

The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
DTE does not foresee water scarcity as an anticipated risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power generation operations. For example, further investment in renewable energy sources would reduce reliance on coal, as well as the risk of water scarcity as it affects our supply chain.
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<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure

Unlikely
Medium
Unknown
Water scarcity would contribute to a potential decrease in fuel supply (e.g., from coal mining or natural gas production) required for power generation. This decrease would disrupt DTE’s supply chain.
Supply chain disruption
Increased water scarcity

Primary potential impact
The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
DTE does not foresee water scarcity as an anticipated risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power generation operations. For example, further investment in renewable energy sources would reduce reliance on coal, as well as the risk of water scarcity as it affects our supply chain.
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<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Unlikely
Medium
Unknown
Water scarcity would contribute to a potential decrease in fuel supply (e.g., from coal mining or natural gas production) required for power generation. This decrease would disrupt DTE’s supply chain.
Supply chain disruption

Company-specific description
The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
DTE does not foresee water scarcity as an anticipated risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power generation operations. For example, further investment in renewable energy sources would reduce reliance on coal, as well as the risk of water scarcity as it affects our supply chain.
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<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Unlikely
Medium
Unknown
Water scarcity would contribute to a potential decrease in fuel supply (e.g., from coal mining or natural gas production) required for power generation. This decrease would disrupt DTE’s supply chain.

Timeframe
The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
DTE does not foresee water scarcity as an anticipated risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power generation operations. For example, further investment in renewable energy sources would reduce reliance on coal, as well as the risk of water scarcity as it affects our supply chain.
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<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Unlikely
Medium
Unknown

Magnitude of potential financial impact
The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
DTE does not foresee water scarcity as an anticipated risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power generation operations. For example, further investment in renewable energy sources would reduce reliance on coal, as well as the risk of water scarcity as it affects our supply chain.
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<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Unlikely
Medium

Likelihood
The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
DTE does not foresee water scarcity as an anticipated risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power

generation operations. For example, further investment in renewable energy sources would reduce reliance on coal, as well as the risk of water scarcity as it affects our supply chain.
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<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Unlikely

Are you able to provide a potential financial impact figure?

The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
DTE does not foresee water scarcity as an anticipated risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power generation operations. For example, further investment in renewable energy sources would reduce reliance on coal, as well as the risk of water scarcity as it affects our supply chain.
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<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure

Potential financial impact figure (currency)

The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
DTE does not foresee water scarcity as an anticipated risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power generation operations. For example, further investment in renewable energy sources would reduce reliance on coal, as well as the risk of water scarcity as it affects our supply chain.
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<Not Applicable>
<Not Applicable>
<Not Applicable>

Potential financial impact figure - minimum (currency)

The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
DTE does not foresee water scarcity as an anticipated risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power generation operations. For example, further investment in renewable energy sources would reduce reliance on coal, as well as the risk of water scarcity as it affects our supply chain.
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<Not Applicable>
<Not Applicable>

Potential financial impact figure - maximum (currency)

The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
DTE does not foresee water scarcity as an anticipated risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power generation operations. For example, further investment in renewable energy sources would reduce reliance on coal, as well as the risk of water scarcity as it affects our supply chain.
Promote investment in infrastructure and technologies for water saving, re-use and recycling among suppliers
Although a specific financial impact figure is unknown, DTE expects that the greatest financial impact would be related to rethinking, redesigning, and implementing power generating processes to minimize reliance on fuel sources affected by water scarcity. DTE expects that costs for fuel in this instance would increase, creating further financial impact.
<Not Applicable>

Explanation of financial impact

The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
DTE does not foresee water scarcity as an anticipated risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power generation operations. For example, further investment in renewable energy sources would reduce reliance on coal, as well as the risk of water scarcity as it affects our supply chain.
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Although a specific financial impact figure is unknown, DTE expects that the greatest financial impact would be related to rethinking, redesigning, and implementing power generating processes to minimize reliance on fuel sources affected by water scarcity. DTE expects that costs for fuel in this instance would increase, creating further financial impact.

Primary response to risk

The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
DTE does not foresee water scarcity as an anticipated risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power generation operations. For example, further investment in renewable energy sources would reduce reliance on coal, as well as the risk of water scarcity as it affects our supply chain.
Promote investment in infrastructure and technologies for water saving, re-use and recycling among suppliers

Description of response

The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
DTE does not foresee water scarcity as an anticipated risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power generation operations. For example, further investment in renewable energy sources would reduce reliance on coal, as well as the risk of water scarcity as it affects our supply chain.

Cost of response
The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.

Explanation of cost of response
The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.

Country/Region
The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
DTE does not foresee seasonal variability as a major risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power generation operations. As the company moves toward closing down coal-fired plants and exploring alternative fuel sources, we expect to reduce this risk even further.
Promote investment in infrastructure and technologies for water saving, re-use and recycling among suppliers
Although a specific financial impact figure is unknown, DTE expects that the greatest financial impact would be related to rethinking, redesigning, and implementing power generating processes to minimize reliance on fuel supply affected by seasonal variability (i.e., DTE's response). DTE expects that costs for fuel in this instance would increase, creating further financial impact.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Unlikely
Unknown
Unknown
Seasonal variability affects water levels, which in turn impacts fuel supply. Water regulations may change related to the coal and natural gas industries as a result. As a result of decreased fuel supply, cost of fuel could potentially increase.
Increased operating costs
Seasonal supply variability/inter annual variability
Physical
Supply chain
St. Lawrence
United States of America

River basin
The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
DTE does not foresee seasonal variability as a major risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power generation operations. As the company moves toward closing down coal-fired plants and exploring alternative fuel sources, we expect to reduce this risk even further.
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<Not Applicable>
<Not Applicable>
<Not Applicable>
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Unknown
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Seasonal variability affects water levels, which in turn impacts fuel supply. Water regulations may change related to the coal and natural gas industries as a result. As a result of decreased fuel supply, cost of fuel could potentially increase.
Increased operating costs
Seasonal supply variability/inter annual variability
Physical
Supply chain
St. Lawrence

Stage of value chain
The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
DTE does not foresee seasonal variability as a major risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power generation operations. As the company moves toward closing down coal-fired plants and exploring alternative fuel sources, we expect to reduce this risk even further.
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<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Unlikely
Unknown
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Seasonal variability affects water levels, which in turn impacts fuel supply. Water regulations may change related to the coal and natural gas industries as a result. As a result of decreased fuel supply, cost of fuel could potentially increase.
Increased operating costs
Seasonal supply variability/inter annual variability
Physical
Supply chain

Type of risk
The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
DTE does not foresee seasonal variability as a major risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power generation operations. As the company moves toward closing down coal-fired plants and exploring alternative fuel sources, we expect to reduce this risk even further.
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<Not Applicable>
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Unlikely
Unknown
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Seasonal variability affects water levels, which in turn impacts fuel supply. Water regulations may change related to the coal and natural gas industries as a result. As a result of decreased fuel supply, cost of fuel could potentially increase.
Increased operating costs
Seasonal supply variability/inter annual variability
Physical

Primary risk driver

The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
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<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Unlikely
Unknown
Unknown
Seasonal variability affects water levels, which in turn impacts fuel supply. Water regulations may change related to the coal and natural gas industries as a result. As a result of decreased fuel supply, cost of fuel could potentially increase.
Increased operating costs
Seasonal supply variability/inter annual variability

Primary potential impact

The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
DTE does not foresee seasonal variability as a major risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power generation operations. As the company moves toward closing down coal-fired plants and exploring alternative fuel sources, we expect to reduce this risk even further.
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<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Unlikely
Unknown
Unknown
Seasonal variability affects water levels, which in turn impacts fuel supply. Water regulations may change related to the coal and natural gas industries as a result. As a result of decreased fuel supply, cost of fuel could potentially increase.
Increased operating costs

Company-specific description

The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
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<Not Applicable>
<Not Applicable>
No, we do not have this figure
Unlikely
Unknown
Unknown
Seasonal variability affects water levels, which in turn impacts fuel supply. Water regulations may change related to the coal and natural gas industries as a result. As a result of decreased fuel supply, cost of fuel could potentially increase.

Timeframe

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DTE does not foresee seasonal variability as a major risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power generation operations. As the company moves toward closing down coal-fired plants and exploring alternative fuel sources, we expect to reduce this risk even further.
Promote investment in infrastructure and technologies for water saving, re-use and recycling among suppliers
Although a specific financial impact figure is unknown, DTE expects that the greatest financial impact would be related to rethinking, redesigning, and implementing power generating processes to minimize reliance on fuel supply affected by seasonal variability (i.e., DTE's response). DTE expects that costs for fuel in this instance would increase, creating further financial impact.
<Not Applicable>
<Not Applicable>

<Not Applicable>
No, we do not have this figure
Unlikely
Unknown
Unknown

Magnitude of potential financial impact

The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
DTE does not foresee seasonal variability as a major risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power generation operations. As the company moves toward closing down coal-fired plants and exploring alternative fuel sources, we expect to reduce this risk even further.
Promote investment in infrastructure and technologies for water saving, re-use and recycling among suppliers
Although a specific financial impact figure is unknown, DTE expects that the greatest financial impact would be related to rethinking, redesigning, and implementing power generating processes to minimize reliance on fuel supply affected by seasonal variability (i.e., DTE's response). DTE expects that costs for fuel in this instance would increase, creating further financial impact.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Unlikely
Unknown

Likelihood

The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
DTE does not foresee seasonal variability as a major risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power generation operations. As the company moves toward closing down coal-fired plants and exploring alternative fuel sources, we expect to reduce this risk even further.
Promote investment in infrastructure and technologies for water saving, re-use and recycling among suppliers
Although a specific financial impact figure is unknown, DTE expects that the greatest financial impact would be related to rethinking, redesigning, and implementing power generating processes to minimize reliance on fuel supply affected by seasonal variability (i.e., DTE's response). DTE expects that costs for fuel in this instance would increase, creating further financial impact.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Unlikely

Are you able to provide a potential financial impact figure?

The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
DTE does not foresee seasonal variability as a major risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power generation operations. As the company moves toward closing down coal-fired plants and exploring alternative fuel sources, we expect to reduce this risk even further.
Promote investment in infrastructure and technologies for water saving, re-use and recycling among suppliers
Although a specific financial impact figure is unknown, DTE expects that the greatest financial impact would be related to rethinking, redesigning, and implementing power generating processes to minimize reliance on fuel supply affected by seasonal variability (i.e., DTE's response). DTE expects that costs for fuel in this instance would increase, creating further financial impact.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure

Potential financial impact figure (currency)

The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
DTE does not foresee seasonal variability as a major risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power generation operations. As the company moves toward closing down coal-fired plants and exploring alternative fuel sources, we expect to reduce this risk even further.
Promote investment in infrastructure and technologies for water saving, re-use and recycling among suppliers
Although a specific financial impact figure is unknown, DTE expects that the greatest financial impact would be related to rethinking, redesigning, and implementing power generating processes to minimize reliance on fuel supply affected by seasonal variability (i.e., DTE's response). DTE expects that costs for fuel in this instance would increase, creating further financial impact.
<Not Applicable>
<Not Applicable>
<Not Applicable>

Potential financial impact figure - minimum (currency)

The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
DTE does not foresee seasonal variability as a major risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power generation operations. As the company moves toward closing down coal-fired plants and exploring alternative fuel sources, we expect to reduce this risk even further.
Promote investment in infrastructure and technologies for water saving, re-use and recycling among suppliers
Although a specific financial impact figure is unknown, DTE expects that the greatest financial impact would be related to rethinking, redesigning, and implementing power generating processes to minimize reliance on fuel supply affected by seasonal variability (i.e., DTE's response). DTE expects that costs for fuel in this instance would increase, creating further financial impact.
<Not Applicable>
<Not Applicable>

Potential financial impact figure - maximum (currency)

The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
DTE does not foresee seasonal variability as a major risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power generation operations. As the company moves toward closing down coal-fired plants and exploring alternative fuel sources, we expect to reduce this risk even further.
Promote investment in infrastructure and technologies for water saving, re-use and recycling among suppliers
Although a specific financial impact figure is unknown, DTE expects that the greatest financial impact would be related to rethinking, redesigning, and implementing power generating processes to minimize reliance on fuel supply affected by seasonal variability (i.e., DTE's response). DTE expects that costs for fuel in this instance would increase, creating further financial impact.
<Not Applicable>

Explanation of financial impact

The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
DTE does not foresee seasonal variability as a major risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power

generation operations. As the company moves toward closing down coal-fired plants and exploring alternative fuel sources, we expect to reduce this risk even further.
Promote investment in infrastructure and technologies for water saving, re-use and recycling among suppliers
Although a specific financial impact figure is unknown, DTE expects that the greatest financial impact would be related to rethinking, redesigning, and implementing power generating processes to minimize reliance on fuel supply affected by seasonal variability (i.e., DTE's response). DTE expects that costs for fuel in this instance would increase, creating further financial impact.

Primary response to risk
The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
DTE does not foresee seasonal variability as a major risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power generation operations. As the company moves toward closing down coal-fired plants and exploring alternative fuel sources, we expect to reduce this risk even further.
Promote investment in infrastructure and technologies for water saving, re-use and recycling among suppliers

Description of response
The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.
DTE does not foresee seasonal variability as a major risk in the near future; however, we would respond by implementing alternative solutions for fuel supply in power generation operations. As the company moves toward closing down coal-fired plants and exploring alternative fuel sources, we expect to reduce this risk even further.

Cost of response
The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.

Explanation of cost of response
The cost of the response would mainly be associated with upgrades, additions, and restructuring of our current power generating processes.

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
This impact has not been quantified financially; however, it would have a large financial impact because most of our power generation facilities benefit from coal supplied from this facility.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
High
Current - up to 1 year
DTE defines substantive impact as legislation or a physical change in supply that would affect our ability to withdraw the water needed to produce electricity for our customers. Additionally, the definition extends to any financial and strategic impact that an investor would deem substantive, and DTE aims to maintain a reputation of sound risk assessment and management among its investors. The company owns and operates a coal management facility located on Lake Superior known as Midwest Energy Resources Company (MERC). MERC is marketed as a resource for the Company and external clients. MERC services the Company and other clients with coal supply needs. The Great Lakes provides a means of shipping coal to Company-owned power plants and other clients; this provides both cost savings and sales opportunities. Power plants are the main facilities to benefit from this opportunity directly; however, cost savings would have a company-wide impact, making it a strategic opportunity.
Reduced impact of product use on water resources
Products and services

Primary water-related opportunity
This impact has not been quantified financially; however, it would have a large financial impact because most of our power generation facilities benefit from coal supplied from this facility.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
High
Current - up to 1 year
DTE defines substantive impact as legislation or a physical change in supply that would affect our ability to withdraw the water needed to produce electricity for our customers. Additionally, the definition extends to any financial and strategic impact that an investor would deem substantive, and DTE aims to maintain a reputation of sound risk assessment and management among its investors. The company owns and operates a coal management facility located on Lake Superior known as Midwest Energy Resources Company (MERC). MERC is marketed as a resource for the Company and external clients. MERC services the Company and other clients with coal supply needs. The Great Lakes provides a means of shipping coal to Company-owned power plants and other clients; this provides both cost savings and sales opportunities. Power plants are the main facilities to benefit from this opportunity directly; however, cost savings would have a company-wide impact, making it a strategic opportunity.
Reduced impact of product use on water resources

Company-specific description & strategy to realize opportunity
This impact has not been quantified financially; however, it would have a large financial impact because most of our power generation facilities benefit from coal supplied from this facility.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
High
Current - up to 1 year

DTE defines substantive impact as legislation or a physical change in supply that would affect our ability to withdraw the water needed to produce electricity for our customers. Additionally, the definition extends to any financial and strategic impact that an investor would deem substantive, and DTE aims to maintain a reputation of sound risk assessment and management among its investors. The company owns and operates a coal management facility located on Lake Superior known as Midwest Energy Resources Company (MERC). MERC is marketed as a resource for the Company and external clients. MERC services the Company and other clients with coal supply needs. The Great Lakes provides a means of shipping coal to Company-owned power plants and other clients; this provides both cost savings and sales opportunities. Power plants are the main facilities to benefit from this opportunity directly; however, cost savings would have a company-wide impact, making it a strategic opportunity.

Estimated timeframe for realization

This impact has not been quantified financially; however, it would have a large financial impact because most of our power generation facilities benefit from coal supplied from this facility.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
High
Current - up to 1 year

Magnitude of potential financial impact

This impact has not been quantified financially; however, it would have a large financial impact because most of our power generation facilities benefit from coal supplied from this facility.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
High

Are you able to provide a potential financial impact figure?

This impact has not been quantified financially; however, it would have a large financial impact because most of our power generation facilities benefit from coal supplied from this facility.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure

Potential financial impact figure (currency)

This impact has not been quantified financially; however, it would have a large financial impact because most of our power generation facilities benefit from coal supplied from this facility.
<Not Applicable>
<Not Applicable>
<Not Applicable>

Potential financial impact figure – minimum (currency)

This impact has not been quantified financially; however, it would have a large financial impact because most of our power generation facilities benefit from coal supplied from this facility.
<Not Applicable>
<Not Applicable>

Potential financial impact figure – maximum (currency)

This impact has not been quantified financially; however, it would have a large financial impact because most of our power generation facilities benefit from coal supplied from this facility.
<Not Applicable>

Explanation of financial impact

This impact has not been quantified financially; however, it would have a large financial impact because most of our power generation facilities benefit from coal supplied from this facility.

Type of opportunity

DTE costs for water for power generation are relatively low; however, diversifying our generation fleet will decrease both capital expenditure and fuel costs in the long term, causing moderate financial impact.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Medium
>6 years
Water efficiency in operations is expected to increase as DTE pursues the opportunity of diversifying its generation fleet. The company will close three coal burning power plants by 2023, and increase the percentage of renewable energy sources. For example, since 2008, DTE has developed 13 wind parks and has spent $170 million developing 31 solar arrays. More water-efficient operations would have company-wide benefits related to cost savings, but would specifically benefit power generation operations. making it a strategic opportunity.
Improved water efficiency in operations
Efficiency

Primary water-related opportunity

DTE costs for water for power generation are relatively low; however, diversifying our generation fleet will decrease both capital expenditure and fuel costs in the long term, causing moderate financial impact.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Medium
>6 years
Water efficiency in operations is expected to increase as DTE pursues the opportunity of diversifying its generation fleet. The company will close three coal burning power plants by 2023, and increase the percentage of renewable energy sources. For example, since 2008, DTE has developed 13 wind parks and has spent $170 million

developing 31 solar arrays. More water-efficient operations would have company-wide benefits related to cost savings, but would specifically benefit power generation operations. making it a strategic opportunity.
Improved water efficiency in operations

Company-specific description & strategy to realize opportunity

DTE costs for water for power generation are relatively low; however, diversifying our generation fleet will decrease both capital expenditure and fuel costs in the long term, causing moderate financial impact.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Medium
>6 years
Water efficiency in operations is expected to increase as DTE pursues the opportunity of diversifying its generation fleet. The company will close three coal burning power plants by 2023, and increase the percentage of renewable energy sources. For example, since 2008, DTE has developed 13 wind parks and has spent $170 million developing 31 solar arrays. More water-efficient operations would have company-wide benefits related to cost savings, but would specifically benefit power generation operations. making it a strategic opportunity.

Estimated timeframe for realization

DTE costs for water for power generation are relatively low; however, diversifying our generation fleet will decrease both capital expenditure and fuel costs in the long term, causing moderate financial impact.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Medium
>6 years

Magnitude of potential financial impact

DTE costs for water for power generation are relatively low; however, diversifying our generation fleet will decrease both capital expenditure and fuel costs in the long term, causing moderate financial impact.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure
Medium

Are you able to provide a potential financial impact figure?

DTE costs for water for power generation are relatively low; however, diversifying our generation fleet will decrease both capital expenditure and fuel costs in the long term, causing moderate financial impact.
<Not Applicable>
<Not Applicable>
<Not Applicable>
No, we do not have this figure

Potential financial impact figure (currency)

DTE costs for water for power generation are relatively low; however, diversifying our generation fleet will decrease both capital expenditure and fuel costs in the long term, causing moderate financial impact.
<Not Applicable>
<Not Applicable>
<Not Applicable>

Potential financial impact figure – minimum (currency)

DTE costs for water for power generation are relatively low; however, diversifying our generation fleet will decrease both capital expenditure and fuel costs in the long term, causing moderate financial impact.
<Not Applicable>
<Not Applicable>

Potential financial impact figure – maximum (currency)

DTE costs for water for power generation are relatively low; however, diversifying our generation fleet will decrease both capital expenditure and fuel costs in the long term, causing moderate financial impact.
<Not Applicable>

Explanation of financial impact

DTE costs for water for power generation are relatively low; however, diversifying our generation fleet will decrease both capital expenditure and fuel costs in the long term, causing moderate financial impact.

W5. Facility-level water accounting

W5.1

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

Facility reference number

The withdrawal, discharge, and consumptive use of water were about the same in 2018 compared to 2017. The thresholds for comparison to previous years are as follows: >50% change = “Much Lower”/”Much Higher”, 25-50% change = “Lower”/”Higher”, and <25% change = “About the Same.” Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The Belle River Power Plant is expected to be retired by 2030; therefore, withdrawals, consumption, and discharge will trend

downward and then go to 0 once the plant is retired. DTE owns 81% of the Belle River Power Plant; however, values reported here encompass the entire plant.
About the same
7744
About the same
722119
About the same
730430
<Not Applicable>
Coal - hard
-82.495833
42.773888
St. Lawrence
United States of America
Belle River Power Plant
Facility 1

Facility name (optional)

The withdrawal, discharge, and consumptive use of water were about the same in 2018 compared to 2017. The thresholds for comparison to previous years are as follows: >50% change = “Much Lower”/”Much Higher”, 25-50% change = “Lower”/”Higher”, and <25% change = “About the Same.” Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The Belle River Power Plant is expected to be retired by 2030; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired. DTE owns 81% of the Belle River Power Plant; however, values reported here encompass the entire plant.
About the same
7744
About the same
722119
About the same
730430
<Not Applicable>
Coal - hard
-82.495833
42.773888
St. Lawrence
United States of America
Belle River Power Plant

Country/Region

The withdrawal, discharge, and consumptive use of water were about the same in 2018 compared to 2017. The thresholds for comparison to previous years are as follows: >50% change = “Much Lower”/”Much Higher”, 25-50% change = “Lower”/”Higher”, and <25% change = “About the Same.” Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The Belle River Power Plant is expected to be retired by 2030; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired. DTE owns 81% of the Belle River Power Plant; however, values reported here encompass the entire plant.
About the same
7744
About the same
722119
About the same
730430
<Not Applicable>
Coal - hard
-82.495833
42.773888
St. Lawrence
United States of America

River basin

The withdrawal, discharge, and consumptive use of water were about the same in 2018 compared to 2017. The thresholds for comparison to previous years are as follows: >50% change = “Much Lower”/”Much Higher”, 25-50% change = “Lower”/”Higher”, and <25% change = “About the Same.” Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The Belle River Power Plant is expected to be retired by 2030; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired. DTE owns 81% of the Belle River Power Plant; however, values reported here encompass the entire plant.
About the same
7744
About the same
722119
About the same
730430
<Not Applicable>
Coal - hard
-82.495833
42.773888
St. Lawrence

Latitude

The withdrawal, discharge, and consumptive use of water were about the same in 2018 compared to 2017. The thresholds for comparison to previous years are as follows: >50% change = “Much Lower”/”Much Higher”, 25-50% change = “Lower”/”Higher”, and <25% change = “About the Same.” Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The Belle River Power Plant is expected to be retired by 2030; therefore, withdrawals, consumption, and discharge will trend

downward and then go to 0 once the plant is retired. DTE owns 81% of the Belle River Power Plant; however, values reported here encompass the entire plant.
About the same
7744
About the same
722119
About the same
730430
<Not Applicable>
Coal - hard
-82.495833
42.773888

Longitude

The withdrawal, discharge, and consumptive use of water were about the same in 2018 compared to 2017. The thresholds for comparison to previous years are as follows: >50% change = "Much Lower"/"Much Higher", 25-50% change = "Lower"/"Higher", and <25% change = "About the Same." Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The Belle River Power Plant is expected to be retired by 2030; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired. DTE owns 81% of the Belle River Power Plant; however, values reported here encompass the entire plant.
About the same
7744
About the same
722119
About the same
730430
<Not Applicable>
Coal - hard
-82.495833

Primary power generation source for your electricity generation at this facility

The withdrawal, discharge, and consumptive use of water were about the same in 2018 compared to 2017. The thresholds for comparison to previous years are as follows: >50% change = "Much Lower"/"Much Higher", 25-50% change = "Lower"/"Higher", and <25% change = "About the Same." Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The Belle River Power Plant is expected to be retired by 2030; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired. DTE owns 81% of the Belle River Power Plant; however, values reported here encompass the entire plant.
About the same
7744
About the same
722119
About the same
730430
<Not Applicable>
Coal - hard

Oil & gas sector business division

The withdrawal, discharge, and consumptive use of water were about the same in 2018 compared to 2017. The thresholds for comparison to previous years are as follows: >50% change = "Much Lower"/"Much Higher", 25-50% change = "Lower"/"Higher", and <25% change = "About the Same." Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The Belle River Power Plant is expected to be retired by 2030; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired. DTE owns 81% of the Belle River Power Plant; however, values reported here encompass the entire plant.
About the same
7744
About the same
722119
About the same
730430
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

The withdrawal, discharge, and consumptive use of water were about the same in 2018 compared to 2017. The thresholds for comparison to previous years are as follows: >50% change = "Much Lower"/"Much Higher", 25-50% change = "Lower"/"Higher", and <25% change = "About the Same." Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The Belle River Power Plant is expected to be retired by 2030; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired. DTE owns 81% of the Belle River Power Plant; however, values reported here encompass the entire plant.
About the same
7744
About the same
722119
About the same
730430

Comparison of withdrawals with previous reporting year

The withdrawal, discharge, and consumptive use of water were about the same in 2018 compared to 2017. The thresholds for comparison to previous years are as follows: >50% change = "Much Lower"/"Much Higher", 25-50% change = "Lower"/"Higher", and <25% change = "About the Same." Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The Belle River Power Plant is expected to be retired by 2030; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired. DTE owns 81% of the Belle River Power Plant; however, values reported here encompass the entire plant.
About the same
7744

About the same
722119
About the same

Total water discharges at this facility (megaliters/year)

The withdrawal, discharge, and consumptive use of water were about the same in 2018 compared to 2017. The thresholds for comparison to previous years are as follows: >50% change = “Much Lower”/”Much Higher”, 25-50% change = “Lower”/”Higher”, and <25% change = “About the Same.” Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The Belle River Power Plant is expected to be retired by 2030; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired. DTE owns 81% of the Belle River Power Plant; however, values reported here encompass the entire plant.
About the same
7744
About the same
722119

Comparison of discharges with previous reporting year

The withdrawal, discharge, and consumptive use of water were about the same in 2018 compared to 2017. The thresholds for comparison to previous years are as follows: >50% change = “Much Lower”/”Much Higher”, 25-50% change = “Lower”/”Higher”, and <25% change = “About the Same.” Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The Belle River Power Plant is expected to be retired by 2030; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired. DTE owns 81% of the Belle River Power Plant; however, values reported here encompass the entire plant.
About the same
7744
About the same

Total water consumption at this facility (megaliters/year)

The withdrawal, discharge, and consumptive use of water were about the same in 2018 compared to 2017. The thresholds for comparison to previous years are as follows: >50% change = “Much Lower”/”Much Higher”, 25-50% change = “Lower”/”Higher”, and <25% change = “About the Same.” Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The Belle River Power Plant is expected to be retired by 2030; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired. DTE owns 81% of the Belle River Power Plant; however, values reported here encompass the entire plant.
About the same
7744

Comparison of consumption with previous reporting year

The withdrawal, discharge, and consumptive use of water were about the same in 2018 compared to 2017. The thresholds for comparison to previous years are as follows: >50% change = “Much Lower”/”Much Higher”, 25-50% change = “Lower”/”Higher”, and <25% change = “About the Same.” Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The Belle River Power Plant is expected to be retired by 2030; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired. DTE owns 81% of the Belle River Power Plant; however, values reported here encompass the entire plant.
About the same

Please explain

The withdrawal, discharge, and consumptive use of water were about the same in 2018 compared to 2017. The thresholds for comparison to previous years are as follows: >50% change = “Much Lower”/”Much Higher”, 25-50% change = “Lower”/”Higher”, and <25% change = “About the Same.” Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The Belle River Power Plant is expected to be retired by 2030; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired. DTE owns 81% of the Belle River Power Plant; however, values reported here encompass the entire plant.

Facility reference number

Withdrawal and consumptive used is zero and shows no change in 2018 compared to 2017. This facility no longer generates electric power and is in the process of being retired. The discharge amount is the amount of water removed from the basements of the plant (groundwater infiltration), which dropped 50%. In the next year, discharge is expected to fall to zero as retiring is completed.
About the same
0
Much lower
6
About the same
0
<Not Applicable>
Not applicable
-82.961388
42.355556
St. Lawrence
United States of America
Connors Creek Power Plant
Facility 2

Facility name (optional)

Withdrawal and consumptive used is zero and shows no change in 2018 compared to 2017. This facility no longer generates electric power and is in the process of being retired. The discharge amount is the amount of water removed from the basements of the plant (groundwater infiltration), which dropped 50%. In the next year, discharge is expected to fall to zero as retiring is completed.
About the same
0
Much lower
6
About the same
0

<Not Applicable>
Not applicable
-82.961388
42.355556
St. Lawrence
United States of America
Connors Creek Power Plant

Country/Region

Withdrawal and consumptive used is zero and shows no change in 2018 compared to 2017. This facility no longer generates electric power and is in the process of being retired. The discharge amount is the amount of water removed from the basements of the plant (groundwater infiltration), which dropped 50%. In the next year, discharge is expected to fall to zero as retiring is completed.
About the same
0
Much lower
6
About the same
0
<Not Applicable>
Not applicable
-82.961388
42.355556
St. Lawrence
United States of America

River basin

Withdrawal and consumptive used is zero and shows no change in 2018 compared to 2017. This facility no longer generates electric power and is in the process of being retired. The discharge amount is the amount of water removed from the basements of the plant (groundwater infiltration), which dropped 50%. In the next year, discharge is expected to fall to zero as retiring is completed.
About the same
0
Much lower
6
About the same
0
<Not Applicable>
Not applicable
-82.961388
42.355556
St. Lawrence

Latitude

Withdrawal and consumptive used is zero and shows no change in 2018 compared to 2017. This facility no longer generates electric power and is in the process of being retired. The discharge amount is the amount of water removed from the basements of the plant (groundwater infiltration), which dropped 50%. In the next year, discharge is expected to fall to zero as retiring is completed.
About the same
0
Much lower
6
About the same
0
<Not Applicable>
Not applicable
-82.961388
42.355556

Longitude

Withdrawal and consumptive used is zero and shows no change in 2018 compared to 2017. This facility no longer generates electric power and is in the process of being retired. The discharge amount is the amount of water removed from the basements of the plant (groundwater infiltration), which dropped 50%. In the next year, discharge is expected to fall to zero as retiring is completed.
About the same
0
Much lower
6
About the same
0
<Not Applicable>
Not applicable
-82.961388

Primary power generation source for your electricity generation at this facility

Withdrawal and consumptive used is zero and shows no change in 2018 compared to 2017. This facility no longer generates electric power and is in the process of being retired. The discharge amount is the amount of water removed from the basements of the plant (groundwater infiltration), which dropped 50%. In the next year, discharge is expected to fall to zero as retiring is completed.
About the same
0
Much lower
6
About the same
0
<Not Applicable>
Not applicable

Oil & gas sector business division
Withdrawal and consumptive used is zero and shows no change in 2018 compared to 2017. This facility no longer generates electric power and is in the process of being retired. The discharge amount is the amount of water removed from the basements of the plant (groundwater infiltration), which dropped 50%. In the next year, discharge is expected to fall to zero as retiring is completed.
About the same
0
Much lower
6
About the same
0
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
Withdrawal and consumptive used is zero and shows no change in 2018 compared to 2017. This facility no longer generates electric power and is in the process of being retired. The discharge amount is the amount of water removed from the basements of the plant (groundwater infiltration), which dropped 50%. In the next year, discharge is expected to fall to zero as retiring is completed.
About the same
0
Much lower
6
About the same
0

Comparison of withdrawals with previous reporting year
Withdrawal and consumptive used is zero and shows no change in 2018 compared to 2017. This facility no longer generates electric power and is in the process of being retired. The discharge amount is the amount of water removed from the basements of the plant (groundwater infiltration), which dropped 50%. In the next year, discharge is expected to fall to zero as retiring is completed.
About the same
0
Much lower
6
About the same

Total water discharges at this facility (megaliters/year)
Withdrawal and consumptive used is zero and shows no change in 2018 compared to 2017. This facility no longer generates electric power and is in the process of being retired. The discharge amount is the amount of water removed from the basements of the plant (groundwater infiltration), which dropped 50%. In the next year, discharge is expected to fall to zero as retiring is completed.
About the same
0
Much lower
6

Comparison of discharges with previous reporting year
Withdrawal and consumptive used is zero and shows no change in 2018 compared to 2017. This facility no longer generates electric power and is in the process of being retired. The discharge amount is the amount of water removed from the basements of the plant (groundwater infiltration), which dropped 50%. In the next year, discharge is expected to fall to zero as retiring is completed.
About the same
0
Much lower

Total water consumption at this facility (megaliters/year)
Withdrawal and consumptive used is zero and shows no change in 2018 compared to 2017. This facility no longer generates electric power and is in the process of being retired. The discharge amount is the amount of water removed from the basements of the plant (groundwater infiltration), which dropped 50%. In the next year, discharge is expected to fall to zero as retiring is completed.
About the same
0

Comparison of consumption with previous reporting year
Withdrawal and consumptive used is zero and shows no change in 2018 compared to 2017. This facility no longer generates electric power and is in the process of being retired. The discharge amount is the amount of water removed from the basements of the plant (groundwater infiltration), which dropped 50%. In the next year, discharge is expected to fall to zero as retiring is completed.
About the same

Please explain
Withdrawal and consumptive used is zero and shows no change in 2018 compared to 2017. This facility no longer generates electric power and is in the process of being retired. The discharge amount is the amount of water removed from the basements of the plant (groundwater infiltration), which dropped 50%. In the next year, discharge is expected to fall to zero as retiring is completed.

Facility reference number
Water withdrawal, consumption, and discharges show little change in 2018 compared to 2017. Water withdrawal is determined by adding discharge and consumption values. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated through a calculation involving the number of pumps and the run time. The Fermi 2 Power Plant is expected to remain at current levels in its water use in the future.
About the same
25016
About the same
31133
About the same
56119
<Not Applicable>
Nuclear
-83.25833
41.9625

St. Lawrence
United States of America
Fermi 2 Power Plant
Facility 3

Facility name (optional)

Water withdrawal, consumption, and discharges show little change in 2018 compared to 2017. Water withdrawal is determined by adding discharge and consumption values. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated through a calculation involving the number of pumps and the run time. The Fermi 2 Power Plant is expected to remain at current levels in its water use in the future.
About the same
25016
About the same
31133
About the same
56119
<Not Applicable>
Nuclear
-83.25833
41.9625
St. Lawrence
United States of America
Fermi 2 Power Plant

Country/Region

Water withdrawal, consumption, and discharges show little change in 2018 compared to 2017. Water withdrawal is determined by adding discharge and consumption values. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated through a calculation involving the number of pumps and the run time. The Fermi 2 Power Plant is expected to remain at current levels in its water use in the future.
About the same
25016
About the same
31133
About the same
56119
<Not Applicable>
Nuclear
-83.25833
41.9625
St. Lawrence
United States of America

River basin

Water withdrawal, consumption, and discharges show little change in 2018 compared to 2017. Water withdrawal is determined by adding discharge and consumption values. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated through a calculation involving the number of pumps and the run time. The Fermi 2 Power Plant is expected to remain at current levels in its water use in the future.
About the same
25016
About the same
31133
About the same
56119
<Not Applicable>
Nuclear
-83.25833
41.9625
St. Lawrence

Latitude

Water withdrawal, consumption, and discharges show little change in 2018 compared to 2017. Water withdrawal is determined by adding discharge and consumption values. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated through a calculation involving the number of pumps and the run time. The Fermi 2 Power Plant is expected to remain at current levels in its water use in the future.
About the same
25016
About the same
31133
About the same
56119
<Not Applicable>
Nuclear
-83.25833
41.9625

Longitude

Water withdrawal, consumption, and discharges show little change in 2018 compared to 2017. Water withdrawal is determined by adding discharge and consumption values. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated through a calculation involving the number of pumps and the run time. The Fermi 2 Power Plant is expected to remain at current levels in its water use in the future.
About the same
25016
About the same

31133
About the same
56119
<Not Applicable>
Nuclear
-83.25833

Primary power generation source for your electricity generation at this facility

Water withdrawal, consumption, and discharges show little change in 2018 compared to 2017. Water withdrawal is determined by adding discharge and consumption values. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated through a calculation involving the number of pumps and the run time. The Fermi 2 Power Plant is expected to remain at current levels in its water use in the future.
About the same
25016
About the same
31133
About the same
56119
<Not Applicable>
Nuclear

Oil & gas sector business division

Water withdrawal, consumption, and discharges show little change in 2018 compared to 2017. Water withdrawal is determined by adding discharge and consumption values. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated through a calculation involving the number of pumps and the run time. The Fermi 2 Power Plant is expected to remain at current levels in its water use in the future.
About the same
25016
About the same
31133
About the same
56119
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

Water withdrawal, consumption, and discharges show little change in 2018 compared to 2017. Water withdrawal is determined by adding discharge and consumption values. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated through a calculation involving the number of pumps and the run time. The Fermi 2 Power Plant is expected to remain at current levels in its water use in the future.
About the same
25016
About the same
31133
About the same
56119

Comparison of withdrawals with previous reporting year

Water withdrawal, consumption, and discharges show little change in 2018 compared to 2017. Water withdrawal is determined by adding discharge and consumption values. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated through a calculation involving the number of pumps and the run time. The Fermi 2 Power Plant is expected to remain at current levels in its water use in the future.
About the same
25016
About the same
31133
About the same

Total water discharges at this facility (megaliters/year)

Water withdrawal, consumption, and discharges show little change in 2018 compared to 2017. Water withdrawal is determined by adding discharge and consumption values. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated through a calculation involving the number of pumps and the run time. The Fermi 2 Power Plant is expected to remain at current levels in its water use in the future.
About the same
25016
About the same
31133

Comparison of discharges with previous reporting year

Water withdrawal, consumption, and discharges show little change in 2018 compared to 2017. Water withdrawal is determined by adding discharge and consumption values. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated through a calculation involving the number of pumps and the run time. The Fermi 2 Power Plant is expected to remain at current levels in its water use in the future.
About the same
25016
About the same

Total water consumption at this facility (megaliters/year)

Water withdrawal, consumption, and discharges show little change in 2018 compared to 2017. Water withdrawal is determined by adding discharge and consumption values. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated through a calculation involving the number of pumps and the run time. The Fermi 2 Power Plant is expected to remain at current levels in its water use in the future.
About the same
25016

Comparison of consumption with previous reporting year

Water withdrawal, consumption, and discharges show little change in 2018 compared to 2017. Water withdrawal is determined by adding discharge and consumption values. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated through a calculation involving the number of pumps and the run time. The Fermi 2 Power Plant is expected to remain at current levels in its water use in the future.

About the same

Please explain

Water withdrawal, consumption, and discharges show little change in 2018 compared to 2017. Water withdrawal is determined by adding discharge and consumption values. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated through a calculation involving the number of pumps and the run time. The Fermi 2 Power Plant is expected to remain at current levels in its water use in the future.

Facility reference number

It should be noted that this facility's closed loop cooling water system uses both municipal water supply and local surface water for makeup. The reported withdrawal is from the municipal supply only; surface water withdrawal is not measured. Withdrawals from the municipal water source are determined through water metering. Consumptive use is calculated by multiplying the total loss rate, due to evaporation and drift, with the operating hours. Withdrawal increased approximately 898% from 2017 to 2018. Withdrawal for this facility is higher in 2018 for two reasons: (1) because the 2017 figure included water used to fill the newly expanded cooling loop, and (2) because the facility ran for more hours than it did in 2017. In 2016 the cooling loop underwent a considerable expansion. The new portion of the loop was filled in 2017 with water from the surrounding drains, in addition to the water from the municipal source. In the future, the total withdrawals for this facility should stay about the same, unless there is a significant increase in its use for power generation. This facility discharges treated process and sanitary water to fresh surface water. There was only sanitary discharge in 2018 (discharge decreased 98%), due to the new closed loop cooling water system. Consumptive use increased approximately 42% due to increased hours of operation. The actual amount of withdrawal is low when compared with the other facilities.

Higher

1053

Much lower

4.8

Much higher

439

<Not Applicable>

Gas

-82.706596

43.219364

St. Lawrence

United States of America

Greenwood Energy Center

Facility 4

Facility name (optional)

It should be noted that this facility's closed loop cooling water system uses both municipal water supply and local surface water for makeup. The reported withdrawal is from the municipal supply only; surface water withdrawal is not measured. Withdrawals from the municipal water source are determined through water metering. Consumptive use is calculated by multiplying the total loss rate, due to evaporation and drift, with the operating hours. Withdrawal increased approximately 898% from 2017 to 2018. Withdrawal for this facility is higher in 2018 for two reasons: (1) because the 2017 figure included water used to fill the newly expanded cooling loop, and (2) because the facility ran for more hours than it did in 2017. In 2016 the cooling loop underwent a considerable expansion. The new portion of the loop was filled in 2017 with water from the surrounding drains, in addition to the water from the municipal source. In the future, the total withdrawals for this facility should stay about the same, unless there is a significant increase in its use for power generation. This facility discharges treated process and sanitary water to fresh surface water. There was only sanitary discharge in 2018 (discharge decreased 98%), due to the new closed loop cooling water system. Consumptive use increased approximately 42% due to increased hours of operation. The actual amount of withdrawal is low when compared with the other facilities.

Higher

1053

Much lower

4.8

Much higher

439

<Not Applicable>

Gas

-82.706596

43.219364

St. Lawrence

United States of America

Greenwood Energy Center

Country/Region

It should be noted that this facility's closed loop cooling water system uses both municipal water supply and local surface water for makeup. The reported withdrawal is from the municipal supply only; surface water withdrawal is not measured. Withdrawals from the municipal water source are determined through water metering. Consumptive use is calculated by multiplying the total loss rate, due to evaporation and drift, with the operating hours. Withdrawal increased approximately 898% from 2017 to 2018. Withdrawal for this facility is higher in 2018 for two reasons: (1) because the 2017 figure included water used to fill the newly expanded cooling loop, and (2) because the facility ran for more hours than it did in 2017. In 2016 the cooling loop underwent a considerable expansion. The new portion of the loop was filled in 2017 with water from the surrounding drains, in addition to the water from the municipal source. In the future, the total withdrawals for this facility should stay about the same, unless there is a significant increase in its use for power generation. This facility discharges treated process and sanitary water to fresh surface water. There was only sanitary discharge in 2018 (discharge decreased 98%), due to the new closed loop cooling water system. Consumptive use increased approximately 42% due to increased hours of operation. The actual amount of withdrawal is low when compared with the other facilities.

Higher

1053

Much lower

4.8

Much higher

439

<Not Applicable>

Gas

-82.706596

43.219364

St. Lawrence
United States of America

River basin

It should be noted that this facility's closed loop cooling water system uses both municipal water supply and local surface water for makeup. The reported withdrawal is from the municipal supply only; surface water withdrawal is not measured. Withdrawals from the municipal water source are determined through water metering. Consumptive use is calculated by multiplying the total loss rate, due to evaporation and drift, with the operating hours. Withdrawal increased approximately 898% from 2017 to 2018. Withdrawal for this facility is higher in 2018 for two reasons: (1) because the 2017 figure included water used to fill the newly expanded cooling loop, and (2) because the facility ran for more hours than it did in 2017. In 2016 the cooling loop underwent a considerable expansion. The new portion of the loop was filled in 2017 with water from the surrounding drains, in addition to the water from the municipal source. In the future, the total withdrawals for this facility should stay about the same, unless there is a significant increase in its use for power generation. This facility discharges treated process and sanitary water to fresh surface water. There was only sanitary discharge in 2018 (discharge decreased 98%), due to the new closed loop cooling water system. Consumptive use increased approximately 42% due to increased hours of operation. The actual amount of withdrawal is low when compared with the other facilities.
Higher
1053
Much lower
4.8
Much higher
439
<Not Applicable>
Gas
-82.706596
43.219364
St. Lawrence

Latitude

It should be noted that this facility's closed loop cooling water system uses both municipal water supply and local surface water for makeup. The reported withdrawal is from the municipal supply only; surface water withdrawal is not measured. Withdrawals from the municipal water source are determined through water metering. Consumptive use is calculated by multiplying the total loss rate, due to evaporation and drift, with the operating hours. Withdrawal increased approximately 898% from 2017 to 2018. Withdrawal for this facility is higher in 2018 for two reasons: (1) because the 2017 figure included water used to fill the newly expanded cooling loop, and (2) because the facility ran for more hours than it did in 2017. In 2016 the cooling loop underwent a considerable expansion. The new portion of the loop was filled in 2017 with water from the surrounding drains, in addition to the water from the municipal source. In the future, the total withdrawals for this facility should stay about the same, unless there is a significant increase in its use for power generation. This facility discharges treated process and sanitary water to fresh surface water. There was only sanitary discharge in 2018 (discharge decreased 98%), due to the new closed loop cooling water system. Consumptive use increased approximately 42% due to increased hours of operation. The actual amount of withdrawal is low when compared with the other facilities.
Higher
1053
Much lower
4.8
Much higher
439
<Not Applicable>
Gas
-82.706596
43.219364

Longitude

It should be noted that this facility's closed loop cooling water system uses both municipal water supply and local surface water for makeup. The reported withdrawal is from the municipal supply only; surface water withdrawal is not measured. Withdrawals from the municipal water source are determined through water metering. Consumptive use is calculated by multiplying the total loss rate, due to evaporation and drift, with the operating hours. Withdrawal increased approximately 898% from 2017 to 2018. Withdrawal for this facility is higher in 2018 for two reasons: (1) because the 2017 figure included water used to fill the newly expanded cooling loop, and (2) because the facility ran for more hours than it did in 2017. In 2016 the cooling loop underwent a considerable expansion. The new portion of the loop was filled in 2017 with water from the surrounding drains, in addition to the water from the municipal source. In the future, the total withdrawals for this facility should stay about the same, unless there is a significant increase in its use for power generation. This facility discharges treated process and sanitary water to fresh surface water. There was only sanitary discharge in 2018 (discharge decreased 98%), due to the new closed loop cooling water system. Consumptive use increased approximately 42% due to increased hours of operation. The actual amount of withdrawal is low when compared with the other facilities.
Higher
1053
Much lower
4.8
Much higher
439
<Not Applicable>
Gas
-82.706596

Primary power generation source for your electricity generation at this facility

It should be noted that this facility's closed loop cooling water system uses both municipal water supply and local surface water for makeup. The reported withdrawal is from the municipal supply only; surface water withdrawal is not measured. Withdrawals from the municipal water source are determined through water metering. Consumptive use is calculated by multiplying the total loss rate, due to evaporation and drift, with the operating hours. Withdrawal increased approximately 898% from 2017 to 2018. Withdrawal for this facility is higher in 2018 for two reasons: (1) because the 2017 figure included water used to fill the newly expanded cooling loop, and (2) because the facility ran for more hours than it did in 2017. In 2016 the cooling loop underwent a considerable expansion. The new portion of the loop was filled in 2017 with water from the surrounding drains, in addition to the water from the municipal source. In the future, the total withdrawals for this facility should stay about the same, unless there is a significant increase in its use for power generation. This facility discharges treated process and sanitary water to fresh surface water. There was only sanitary discharge in 2018 (discharge decreased 98%), due to the new closed loop cooling water system. Consumptive use increased approximately 42% due to increased hours of operation. The actual amount of withdrawal is low when compared with the other facilities.
Higher
1053
Much lower
4.8
Much higher
439

<Not Applicable>
Gas

Oil & gas sector business division

It should be noted that this facility's closed loop cooling water system uses both municipal water supply and local surface water for makeup. The reported withdrawal is from the municipal supply only; surface water withdrawal is not measured. Withdrawals from the municipal water source are determined through water metering. Consumptive use is calculated by multiplying the total loss rate, due to evaporation and drift, with the operating hours. Withdrawal increased approximately 898% from 2017 to 2018. Withdrawal for this facility is higher in 2018 for two reasons: (1) because the 2017 figure included water used to fill the newly expanded cooling loop, and (2) because the facility ran for more hours than it did in 2017. In 2016 the cooling loop underwent a considerable expansion. The new portion of the loop was filled in 2017 with water from the surrounding drains, in addition to the water from the municipal source. In the future, the total withdrawals for this facility should stay about the same, unless there is a significant increase in its use for power generation. This facility discharges treated process and sanitary water to fresh surface water. There was only sanitary discharge in 2018 (discharge decreased 98%), due to the new closed loop cooling water system. Consumptive use increased approximately 42% due to increased hours of operation. The actual amount of withdrawal is low when compared with the other facilities.
Higher
1053
Much lower
4.8
Much higher
439
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

It should be noted that this facility's closed loop cooling water system uses both municipal water supply and local surface water for makeup. The reported withdrawal is from the municipal supply only; surface water withdrawal is not measured. Withdrawals from the municipal water source are determined through water metering. Consumptive use is calculated by multiplying the total loss rate, due to evaporation and drift, with the operating hours. Withdrawal increased approximately 898% from 2017 to 2018. Withdrawal for this facility is higher in 2018 for two reasons: (1) because the 2017 figure included water used to fill the newly expanded cooling loop, and (2) because the facility ran for more hours than it did in 2017. In 2016 the cooling loop underwent a considerable expansion. The new portion of the loop was filled in 2017 with water from the surrounding drains, in addition to the water from the municipal source. In the future, the total withdrawals for this facility should stay about the same, unless there is a significant increase in its use for power generation. This facility discharges treated process and sanitary water to fresh surface water. There was only sanitary discharge in 2018 (discharge decreased 98%), due to the new closed loop cooling water system. Consumptive use increased approximately 42% due to increased hours of operation. The actual amount of withdrawal is low when compared with the other facilities.
Higher
1053
Much lower
4.8
Much higher
439

Comparison of withdrawals with previous reporting year

It should be noted that this facility's closed loop cooling water system uses both municipal water supply and local surface water for makeup. The reported withdrawal is from the municipal supply only; surface water withdrawal is not measured. Withdrawals from the municipal water source are determined through water metering. Consumptive use is calculated by multiplying the total loss rate, due to evaporation and drift, with the operating hours. Withdrawal increased approximately 898% from 2017 to 2018. Withdrawal for this facility is higher in 2018 for two reasons: (1) because the 2017 figure included water used to fill the newly expanded cooling loop, and (2) because the facility ran for more hours than it did in 2017. In 2016 the cooling loop underwent a considerable expansion. The new portion of the loop was filled in 2017 with water from the surrounding drains, in addition to the water from the municipal source. In the future, the total withdrawals for this facility should stay about the same, unless there is a significant increase in its use for power generation. This facility discharges treated process and sanitary water to fresh surface water. There was only sanitary discharge in 2018 (discharge decreased 98%), due to the new closed loop cooling water system. Consumptive use increased approximately 42% due to increased hours of operation. The actual amount of withdrawal is low when compared with the other facilities.
Higher
1053
Much lower
4.8
Much higher

Total water discharges at this facility (megaliters/year)

It should be noted that this facility's closed loop cooling water system uses both municipal water supply and local surface water for makeup. The reported withdrawal is from the municipal supply only; surface water withdrawal is not measured. Withdrawals from the municipal water source are determined through water metering. Consumptive use is calculated by multiplying the total loss rate, due to evaporation and drift, with the operating hours. Withdrawal increased approximately 898% from 2017 to 2018. Withdrawal for this facility is higher in 2018 for two reasons: (1) because the 2017 figure included water used to fill the newly expanded cooling loop, and (2) because the facility ran for more hours than it did in 2017. In 2016 the cooling loop underwent a considerable expansion. The new portion of the loop was filled in 2017 with water from the surrounding drains, in addition to the water from the municipal source. In the future, the total withdrawals for this facility should stay about the same, unless there is a significant increase in its use for power generation. This facility discharges treated process and sanitary water to fresh surface water. There was only sanitary discharge in 2018 (discharge decreased 98%), due to the new closed loop cooling water system. Consumptive use increased approximately 42% due to increased hours of operation. The actual amount of withdrawal is low when compared with the other facilities.
Higher
1053
Much lower
4.8

Comparison of discharges with previous reporting year

It should be noted that this facility's closed loop cooling water system uses both municipal water supply and local surface water for makeup. The reported withdrawal is from the municipal supply only; surface water withdrawal is not measured. Withdrawals from the municipal water source are determined through water metering. Consumptive use is calculated by multiplying the total loss rate, due to evaporation and drift, with the operating hours. Withdrawal increased approximately 898% from 2017 to 2018. Withdrawal for this facility is higher in 2018 for two reasons: (1) because the 2017 figure included water used to fill the newly expanded cooling loop, and (2) because the facility ran for more hours than it did in 2017. In 2016 the cooling loop underwent a considerable expansion. The new portion of the loop was filled in 2017 with water from the surrounding drains, in addition to the water from the municipal source. In the future, the total withdrawals for this facility should stay about the same, unless there is a significant increase in its use for power generation. This facility discharges treated process and sanitary water to fresh surface water. There was only sanitary discharge in 2018 (discharge decreased 98%), due to the new closed loop cooling water system. Consumptive use increased approximately 42% due to increased hours of operation. The actual amount of withdrawal is low when compared with the other facilities.
Higher
1053
Much lower

Total water consumption at this facility (megaliters/year)

It should be noted that this facility's closed loop cooling water system uses both municipal water supply and local surface water for makeup. The reported withdrawal is from the municipal supply only; surface water withdrawal is not measured. Withdrawals from the municipal water source are determined through water metering. Consumptive use is calculated by multiplying the total loss rate, due to evaporation and drift, with the operating hours. Withdrawal increased approximately 898% from 2017 to 2018. Withdrawal for this facility is higher in 2018 for two reasons: (1) because the 2017 figure included water used to fill the newly expanded cooling loop, and (2) because the facility ran for more hours than it did in 2017. In 2016 the cooling loop underwent a considerable expansion. The new portion of the loop was filled in 2017 with water from the surrounding drains, in addition to the water from the municipal source. In the future, the total withdrawals for this facility should stay about the same, unless there is a significant increase in its use for power generation. This facility discharges treated process and sanitary water to fresh surface water. There was only sanitary discharge in 2018 (discharge decreased 98%), due to the new closed loop cooling water system. Consumptive use increased approximately 42% due to increased hours of operation. The actual amount of withdrawal is low when compared with the other facilities.
Higher
1053

Comparison of consumption with previous reporting year

It should be noted that this facility's closed loop cooling water system uses both municipal water supply and local surface water for makeup. The reported withdrawal is from the municipal supply only; surface water withdrawal is not measured. Withdrawals from the municipal water source are determined through water metering. Consumptive use is calculated by multiplying the total loss rate, due to evaporation and drift, with the operating hours. Withdrawal increased approximately 898% from 2017 to 2018. Withdrawal for this facility is higher in 2018 for two reasons: (1) because the 2017 figure included water used to fill the newly expanded cooling loop, and (2) because the facility ran for more hours than it did in 2017. In 2016 the cooling loop underwent a considerable expansion. The new portion of the loop was filled in 2017 with water from the surrounding drains, in addition to the water from the municipal source. In the future, the total withdrawals for this facility should stay about the same, unless there is a significant increase in its use for power generation. This facility discharges treated process and sanitary water to fresh surface water. There was only sanitary discharge in 2018 (discharge decreased 98%), due to the new closed loop cooling water system. Consumptive use increased approximately 42% due to increased hours of operation. The actual amount of withdrawal is low when compared with the other facilities.
Higher

Please explain

It should be noted that this facility's closed loop cooling water system uses both municipal water supply and local surface water for makeup. The reported withdrawal is from the municipal supply only; surface water withdrawal is not measured. Withdrawals from the municipal water source are determined through water metering. Consumptive use is calculated by multiplying the total loss rate, due to evaporation and drift, with the operating hours. Withdrawal increased approximately 898% from 2017 to 2018. Withdrawal for this facility is higher in 2018 for two reasons: (1) because the 2017 figure included water used to fill the newly expanded cooling loop, and (2) because the facility ran for more hours than it did in 2017. In 2016 the cooling loop underwent a considerable expansion. The new portion of the loop was filled in 2017 with water from the surrounding drains, in addition to the water from the municipal source. In the future, the total withdrawals for this facility should stay about the same, unless there is a significant increase in its use for power generation. This facility discharges treated process and sanitary water to fresh surface water. There was only sanitary discharge in 2018 (discharge decreased 98%), due to the new closed loop cooling water system. Consumptive use increased approximately 42% due to increased hours of operation. The actual amount of withdrawal is low when compared with the other facilities.

Facility reference number

This facility no longer generates electric power and was divested to a developer. In 2018 there were no withdrawals or consumption. The discharge is accumulated stormwater in the treatment basins.
About the same
0
About the same
86
About the same
0
<Not Applicable>
Not applicable
-82.64405
43.85155
St. Lawrence
United States of America
Harbor Beach Power Plant
Facility 5

Facility name (optional)

This facility no longer generates electric power and was divested to a developer. In 2018 there were no withdrawals or consumption. The discharge is accumulated stormwater in the treatment basins.
About the same
0
About the same
86
About the same
0
<Not Applicable>
Not applicable
-82.64405
43.85155
St. Lawrence
United States of America
Harbor Beach Power Plant

Country/Region

This facility no longer generates electric power and was divested to a developer. In 2018 there were no withdrawals or consumption. The discharge is accumulated stormwater in the treatment basins.
About the same
0
About the same
86
About the same
0
<Not Applicable>
Not applicable

-82.64405
43.85155
St. Lawrence
United States of America

River basin

This facility no longer generates electric power and was divested to a developer. In 2018 there were no withdrawals or consumption. The discharge is accumulated stormwater in the treatment basins.
About the same
0
About the same
86
About the same
0
<Not Applicable>
Not applicable
-82.64405
43.85155
St. Lawrence

Latitude

This facility no longer generates electric power and was divested to a developer. In 2018 there were no withdrawals or consumption. The discharge is accumulated stormwater in the treatment basins.
About the same
0
About the same
86
About the same
0
<Not Applicable>
Not applicable
-82.64405
43.85155

Longitude

This facility no longer generates electric power and was divested to a developer. In 2018 there were no withdrawals or consumption. The discharge is accumulated stormwater in the treatment basins.
About the same
0
About the same
86
About the same
0
<Not Applicable>
Not applicable
-82.64405

Primary power generation source for your electricity generation at this facility

This facility no longer generates electric power and was divested to a developer. In 2018 there were no withdrawals or consumption. The discharge is accumulated stormwater in the treatment basins.
About the same
0
About the same
86
About the same
0
<Not Applicable>
Not applicable

Oil & gas sector business division

This facility no longer generates electric power and was divested to a developer. In 2018 there were no withdrawals or consumption. The discharge is accumulated stormwater in the treatment basins.
About the same
0
About the same
86
About the same
0
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

This facility no longer generates electric power and was divested to a developer. In 2018 there were no withdrawals or consumption. The discharge is accumulated stormwater in the treatment basins.
About the same
0
About the same
86
About the same
0

Comparison of withdrawals with previous reporting year

This facility no longer generates electric power and was divested to a developer. In 2018 there were no withdrawals or consumption. The discharge is accumulated stormwater in the treatment basins.
About the same

0
About the same
86
About the same

Total water discharges at this facility (megaliters/year)
This facility no longer generates electric power and was divested to a developer. In 2018 there were no withdrawals or consumption. The discharge is accumulated stormwater in the treatment basins.
About the same
0
About the same
86

Comparison of discharges with previous reporting year
This facility no longer generates electric power and was divested to a developer. In 2018 there were no withdrawals or consumption. The discharge is accumulated stormwater in the treatment basins.
About the same
0
About the same

Total water consumption at this facility (megaliters/year)
This facility no longer generates electric power and was divested to a developer. In 2018 there were no withdrawals or consumption. The discharge is accumulated stormwater in the treatment basins.
About the same
0

Comparison of consumption with previous reporting year
This facility no longer generates electric power and was divested to a developer. In 2018 there were no withdrawals or consumption. The discharge is accumulated stormwater in the treatment basins.
About the same

Please explain
This facility no longer generates electric power and was divested to a developer. In 2018 there were no withdrawals or consumption. The discharge is accumulated stormwater in the treatment basins.

Facility reference number
Withdrawal, discharge, and consumptive water use have remained about the same in 2018 compared to 2017. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. Withdrawals, consumption, and discharge are not expected to change significantly until the plant begins the process of shutting down in the late 2030s.
About the same
34049
About the same
2069842
About the same
2103642
<Not Applicable>
Coal - hard
-83.346132
41.893173
St. Lawrence
United States of America
Monroe Power Plant
Facility 7

Facility name (optional)
Withdrawal, discharge, and consumptive water use have remained about the same in 2018 compared to 2017. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. Withdrawals, consumption, and discharge are not expected to change significantly until the plant begins the process of shutting down in the late 2030s.
About the same
34049
About the same
2069842
About the same
2103642
<Not Applicable>
Coal - hard
-83.346132
41.893173
St. Lawrence
United States of America
Monroe Power Plant

Country/Region
Withdrawal, discharge, and consumptive water use have remained about the same in 2018 compared to 2017. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. Withdrawals, consumption, and discharge are not expected to change significantly until the plant begins the process of shutting down in the late 2030s.
About the same

34049
About the same
2069842
About the same
2103642
<Not Applicable>
Coal - hard
-83.346132
41.893173
St. Lawrence
United States of America

River basin

Withdrawal, discharge, and consumptive water use have remained about the same in 2018 compared to 2017. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. Withdrawals, consumption, and discharge are not expected to change significantly until the plant begins the process of shutting down in the late 2030s.
About the same
34049
About the same
2069842
About the same
2103642
<Not Applicable>
Coal - hard
-83.346132
41.893173
St. Lawrence

Latitude

Withdrawal, discharge, and consumptive water use have remained about the same in 2018 compared to 2017. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. Withdrawals, consumption, and discharge are not expected to change significantly until the plant begins the process of shutting down in the late 2030s.
About the same
34049
About the same
2069842
About the same
2103642
<Not Applicable>
Coal - hard
-83.346132
41.893173

Longitude

Withdrawal, discharge, and consumptive water use have remained about the same in 2018 compared to 2017. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. Withdrawals, consumption, and discharge are not expected to change significantly until the plant begins the process of shutting down in the late 2030s.
About the same
34049
About the same
2069842
About the same
2103642
<Not Applicable>
Coal - hard
-83.346132

Primary power generation source for your electricity generation at this facility

Withdrawal, discharge, and consumptive water use have remained about the same in 2018 compared to 2017. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. Withdrawals, consumption, and discharge are not expected to change significantly until the plant begins the process of shutting down in the late 2030s.
About the same
34049
About the same
2069842
About the same
2103642
<Not Applicable>
Coal - hard

Oil & gas sector business division

Withdrawal, discharge, and consumptive water use have remained about the same in 2018 compared to 2017. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. Withdrawals, consumption, and discharge are not expected to change significantly until the plant begins the process of

shutting down in the late 2030s.
About the same
34049
About the same
2069842
About the same
2103642
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

Withdrawal, discharge, and consumptive water use have remained about the same in 2018 compared to 2017. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. Withdrawals, consumption, and discharge are not expected to change significantly until the plant begins the process of shutting down in the late 2030s.
About the same
34049
About the same
2069842
About the same
2103642

Comparison of withdrawals with previous reporting year

Withdrawal, discharge, and consumptive water use have remained about the same in 2018 compared to 2017. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. Withdrawals, consumption, and discharge are not expected to change significantly until the plant begins the process of shutting down in the late 2030s.
About the same
34049
About the same
2069842
About the same

Total water discharges at this facility (megaliters/year)

Withdrawal, discharge, and consumptive water use have remained about the same in 2018 compared to 2017. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. Withdrawals, consumption, and discharge are not expected to change significantly until the plant begins the process of shutting down in the late 2030s.
About the same
34049
About the same
2069842

Comparison of discharges with previous reporting year

Withdrawal, discharge, and consumptive water use have remained about the same in 2018 compared to 2017. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. Withdrawals, consumption, and discharge are not expected to change significantly until the plant begins the process of shutting down in the late 2030s.
About the same
34049
About the same

Total water consumption at this facility (megaliters/year)

Withdrawal, discharge, and consumptive water use have remained about the same in 2018 compared to 2017. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. Withdrawals, consumption, and discharge are not expected to change significantly until the plant begins the process of shutting down in the late 2030s.
About the same
34049

Comparison of consumption with previous reporting year

Withdrawal, discharge, and consumptive water use have remained about the same in 2018 compared to 2017. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. Withdrawals, consumption, and discharge are not expected to change significantly until the plant begins the process of shutting down in the late 2030s.
About the same

Please explain

Withdrawal, discharge, and consumptive water use have remained about the same in 2018 compared to 2017. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. Withdrawals, consumption, and discharge are not expected to change significantly until the plant begins the process of shutting down in the late 2030s.

Facility reference number

Withdrawal, discharge, and consumptive use decreased by 20-22% in 2018 compared to 2017, due to an extensive outage for maintenance of one of the two operational units. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss.

Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The River Rouge Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
About the same
728
About the same
161535
About the same
162088
<Not Applicable>
Coal - hard
-83.1117
42.2738
St. Lawrence
United States of America
River Rouge Power Plant
Facility 8

Facility name (optional)

Withdrawal, discharge, and consumptive use decreased by 20-22% in 2018 compared to 2017, due to an extensive outage for maintenance of one of the two operational units. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The River Rouge Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
About the same
728
About the same
161535
About the same
162088
<Not Applicable>
Coal - hard
-83.1117
42.2738
St. Lawrence
United States of America
River Rouge Power Plant

Country/Region

Withdrawal, discharge, and consumptive use decreased by 20-22% in 2018 compared to 2017, due to an extensive outage for maintenance of one of the two operational units. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The River Rouge Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
About the same
728
About the same
161535
About the same
162088
<Not Applicable>
Coal - hard
-83.1117
42.2738
St. Lawrence
United States of America

River basin

Withdrawal, discharge, and consumptive use decreased by 20-22% in 2018 compared to 2017, due to an extensive outage for maintenance of one of the two operational units. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The River Rouge Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
About the same
728
About the same
161535
About the same
162088
<Not Applicable>
Coal - hard
-83.1117
42.2738
St. Lawrence

Latitude

Withdrawal, discharge, and consumptive use decreased by 20-22% in 2018 compared to 2017, due to an extensive outage for maintenance of one of the two operational units. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The River Rouge Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
About the same
728

About the same
161535
About the same
162088
<Not Applicable>
Coal - hard
-83.1117
42.2738

Longitude

Withdrawal, discharge, and consumptive use decreased by 20-22% in 2018 compared to 2017, due to an extensive outage for maintenance of one of the two operational units. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The River Rouge Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
About the same
728
About the same
161535
About the same
162088
<Not Applicable>
Coal - hard
-83.1117

Primary power generation source for your electricity generation at this facility

Withdrawal, discharge, and consumptive use decreased by 20-22% in 2018 compared to 2017, due to an extensive outage for maintenance of one of the two operational units. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The River Rouge Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
About the same
728
About the same
161535
About the same
162088
<Not Applicable>
Coal - hard

Oil & gas sector business division

Withdrawal, discharge, and consumptive use decreased by 20-22% in 2018 compared to 2017, due to an extensive outage for maintenance of one of the two operational units. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The River Rouge Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
About the same
728
About the same
161535
About the same
162088
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

Withdrawal, discharge, and consumptive use decreased by 20-22% in 2018 compared to 2017, due to an extensive outage for maintenance of one of the two operational units. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The River Rouge Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
About the same
728
About the same
161535
About the same
162088

Comparison of withdrawals with previous reporting year

Withdrawal, discharge, and consumptive use decreased by 20-22% in 2018 compared to 2017, due to an extensive outage for maintenance of one of the two operational units. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The River Rouge Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
About the same
728
About the same
161535
About the same

Total water discharges at this facility (megaliters/year)

Withdrawal, discharge, and consumptive use decreased by 20-22% in 2018 compared to 2017, due to an extensive outage for maintenance of one of the two operational units. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss.

Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The River Rouge Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
About the same
728
About the same
161535

Comparison of discharges with previous reporting year

Withdrawal, discharge, and consumptive use decreased by 20-22% in 2018 compared to 2017, due to an extensive outage for maintenance of one of the two operational units. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The River Rouge Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
About the same
728
About the same

Total water consumption at this facility (megaliters/year)

Withdrawal, discharge, and consumptive use decreased by 20-22% in 2018 compared to 2017, due to an extensive outage for maintenance of one of the two operational units. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The River Rouge Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
About the same
728

Comparison of consumption with previous reporting year

Withdrawal, discharge, and consumptive use decreased by 20-22% in 2018 compared to 2017, due to an extensive outage for maintenance of one of the two operational units. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The River Rouge Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
About the same

Please explain

Withdrawal, discharge, and consumptive use decreased by 20-22% in 2018 compared to 2017, due to an extensive outage for maintenance of one of the two operational units. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The River Rouge Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.

Facility reference number

Water withdrawal and discharge increased by 30%, and consumptive use increased by 24% due to a full year's operation of St. Clair Unit 7 which experienced a fire in 2016. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
About the same
6928
Higher
1001829
Higher
1008484
<Not Applicable>
Coal - hard
-82.472222
42.762777
St. Lawrence
United States of America
St. Clair Power Plant
Facility 9

Facility name (optional)

Water withdrawal and discharge increased by 30%, and consumptive use increased by 24% due to a full year's operation of St. Clair Unit 7 which experienced a fire in 2016. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
About the same
6928
Higher
1001829
Higher
1008484
<Not Applicable>
Coal - hard
-82.472222
42.762777
St. Lawrence
United States of America
St. Clair Power Plant

Country/Region

Water withdrawal and discharge increased by 30%, and consumptive use increased by 24% due to a full year's operation of St. Clair Unit 7 which experienced a fire in 2016. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
About the same
6928
Higher
1001829
Higher
1008484
<Not Applicable>
Coal - hard
-82.472222
42.762777
St. Lawrence
United States of America

River basin

Water withdrawal and discharge increased by 30%, and consumptive use increased by 24% due to a full year's operation of St. Clair Unit 7 which experienced a fire in 2016. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
About the same
6928
Higher
1001829
Higher
1008484
<Not Applicable>
Coal - hard
-82.472222
42.762777
St. Lawrence

Latitude

Water withdrawal and discharge increased by 30%, and consumptive use increased by 24% due to a full year's operation of St. Clair Unit 7 which experienced a fire in 2016. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
About the same
6928
Higher
1001829
Higher
1008484
<Not Applicable>
Coal - hard
-82.472222
42.762777

Longitude

Water withdrawal and discharge increased by 30%, and consumptive use increased by 24% due to a full year's operation of St. Clair Unit 7 which experienced a fire in 2016. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
About the same
6928
Higher
1001829
Higher
1008484
<Not Applicable>
Coal - hard
-82.472222

Primary power generation source for your electricity generation at this facility

Water withdrawal and discharge increased by 30%, and consumptive use increased by 24% due to a full year's operation of St. Clair Unit 7 which experienced a fire in 2016. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
About the same
6928
Higher
1001829
Higher
1008484
<Not Applicable>

Coal - hard

Oil & gas sector business division

Water withdrawal and discharge increased by 30%, and consumptive use increased by 24% due to a full year's operation of St. Clair Unit 7 which experienced a fire in 2016. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
About the same
6928
Higher
1001829
Higher
1008484
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

Water withdrawal and discharge increased by 30%, and consumptive use increased by 24% due to a full year's operation of St. Clair Unit 7 which experienced a fire in 2016. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
About the same
6928
Higher
1001829
Higher
1008484

Comparison of withdrawals with previous reporting year

Water withdrawal and discharge increased by 30%, and consumptive use increased by 24% due to a full year's operation of St. Clair Unit 7 which experienced a fire in 2016. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
About the same
6928
Higher
1001829
Higher

Total water discharges at this facility (megaliters/year)

Water withdrawal and discharge increased by 30%, and consumptive use increased by 24% due to a full year's operation of St. Clair Unit 7 which experienced a fire in 2016. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
About the same
6928
Higher
1001829

Comparison of discharges with previous reporting year

Water withdrawal and discharge increased by 30%, and consumptive use increased by 24% due to a full year's operation of St. Clair Unit 7 which experienced a fire in 2016. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
About the same
6928
Higher

Total water consumption at this facility (megaliters/year)

Water withdrawal and discharge increased by 30%, and consumptive use increased by 24% due to a full year's operation of St. Clair Unit 7 which experienced a fire in 2016. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
About the same
6928

Comparison of consumption with previous reporting year

Water withdrawal and discharge increased by 30%, and consumptive use increased by 24% due to a full year's operation of St. Clair Unit 7 which experienced a fire in 2016. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
About the same

Please explain

Water withdrawal and discharge increased by 30%, and consumptive use increased by 24% due to a full year's operation of St. Clair Unit 7 which experienced a fire in 2016. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.

Facility reference number

The water withdrawal and discharge is about the same as in previous year, about 2.9% higher in 2018 compared to 2017. Sibley Quarry is a limestone quarry that is currently not being actively mined. A Type III Low Hazard Industrial Landfill is being operated in portions of the quarry that have already been mined. The quarry is currently dewatered via the quarry sump, which consists primarily of groundwater and precipitation. Pumping continues to support the landfill operations. In the future, water use for Sibley Quarry is expected to show no significant changes. Discharge rates are measured with a flow meter and withdrawals are considered equal to discharges since there is no consumptive use, just pure dewatering.
About the same
0
About the same
2081
About the same
2081
<Not Applicable>
Not applicable
-83.187871
42.158009
St. Lawrence
United States of America
Sibley Quarry
Facility 10

Facility name (optional)

The water withdrawal and discharge is about the same as in previous year, about 2.9% higher in 2018 compared to 2017. Sibley Quarry is a limestone quarry that is currently not being actively mined. A Type III Low Hazard Industrial Landfill is being operated in portions of the quarry that have already been mined. The quarry is currently dewatered via the quarry sump, which consists primarily of groundwater and precipitation. Pumping continues to support the landfill operations. In the future, water use for Sibley Quarry is expected to show no significant changes. Discharge rates are measured with a flow meter and withdrawals are considered equal to discharges since there is no consumptive use, just pure dewatering.
About the same
0
About the same
2081
About the same
2081
<Not Applicable>
Not applicable
-83.187871
42.158009
St. Lawrence
United States of America
Sibley Quarry

Country/Region

The water withdrawal and discharge is about the same as in previous year, about 2.9% higher in 2018 compared to 2017. Sibley Quarry is a limestone quarry that is currently not being actively mined. A Type III Low Hazard Industrial Landfill is being operated in portions of the quarry that have already been mined. The quarry is currently dewatered via the quarry sump, which consists primarily of groundwater and precipitation. Pumping continues to support the landfill operations. In the future, water use for Sibley Quarry is expected to show no significant changes. Discharge rates are measured with a flow meter and withdrawals are considered equal to discharges since there is no consumptive use, just pure dewatering.
About the same
0
About the same
2081
About the same
2081
<Not Applicable>
Not applicable
-83.187871
42.158009
St. Lawrence
United States of America

River basin

The water withdrawal and discharge is about the same as in previous year, about 2.9% higher in 2018 compared to 2017. Sibley Quarry is a limestone quarry that is currently not being actively mined. A Type III Low Hazard Industrial Landfill is being operated in portions of the quarry that have already been mined. The quarry is currently dewatered via the quarry sump, which consists primarily of groundwater and precipitation. Pumping continues to support the landfill operations. In the future, water use for Sibley Quarry is expected to show no significant changes. Discharge rates are measured with a flow meter and withdrawals are considered equal to discharges since there is no consumptive use, just pure dewatering.
About the same
0
About the same
2081
About the same
2081
<Not Applicable>
Not applicable
-83.187871
42.158009
St. Lawrence

Latitude

The water withdrawal and discharge is about the same as in previous year, about 2.9% higher in 2018 compared to 2017. Sibley Quarry is a limestone quarry that is

currently not being actively mined. A Type III Low Hazard Industrial Landfill is being operated in portions of the quarry that have already been mined. The quarry is currently dewatered via the quarry sump, which consists primarily of groundwater and precipitation. Pumping continues to support the landfill operations. In the future, water use for Sibley Quarry is expected to show no significant changes. Discharge rates are measured with a flow meter and withdrawals are considered equal to discharges since there is no consumptive use, just pure dewatering.
About the same
0
About the same
2081
About the same
2081
<Not Applicable>
Not applicable
-83.187871
42.158009

Longitude

The water withdrawal and discharge is about the same as in previous year, about 2.9% higher in 2018 compared to 2017. Sibley Quarry is a limestone quarry that is currently not being actively mined. A Type III Low Hazard Industrial Landfill is being operated in portions of the quarry that have already been mined. The quarry is currently dewatered via the quarry sump, which consists primarily of groundwater and precipitation. Pumping continues to support the landfill operations. In the future, water use for Sibley Quarry is expected to show no significant changes. Discharge rates are measured with a flow meter and withdrawals are considered equal to discharges since there is no consumptive use, just pure dewatering.
About the same
0
About the same
2081
About the same
2081
<Not Applicable>
Not applicable
-83.187871

Primary power generation source for your electricity generation at this facility

The water withdrawal and discharge is about the same as in previous year, about 2.9% higher in 2018 compared to 2017. Sibley Quarry is a limestone quarry that is currently not being actively mined. A Type III Low Hazard Industrial Landfill is being operated in portions of the quarry that have already been mined. The quarry is currently dewatered via the quarry sump, which consists primarily of groundwater and precipitation. Pumping continues to support the landfill operations. In the future, water use for Sibley Quarry is expected to show no significant changes. Discharge rates are measured with a flow meter and withdrawals are considered equal to discharges since there is no consumptive use, just pure dewatering.
About the same
0
About the same
2081
About the same
2081
<Not Applicable>
Not applicable

Oil & gas sector business division

The water withdrawal and discharge is about the same as in previous year, about 2.9% higher in 2018 compared to 2017. Sibley Quarry is a limestone quarry that is currently not being actively mined. A Type III Low Hazard Industrial Landfill is being operated in portions of the quarry that have already been mined. The quarry is currently dewatered via the quarry sump, which consists primarily of groundwater and precipitation. Pumping continues to support the landfill operations. In the future, water use for Sibley Quarry is expected to show no significant changes. Discharge rates are measured with a flow meter and withdrawals are considered equal to discharges since there is no consumptive use, just pure dewatering.
About the same
0
About the same
2081
About the same
2081
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

The water withdrawal and discharge is about the same as in previous year, about 2.9% higher in 2018 compared to 2017. Sibley Quarry is a limestone quarry that is currently not being actively mined. A Type III Low Hazard Industrial Landfill is being operated in portions of the quarry that have already been mined. The quarry is currently dewatered via the quarry sump, which consists primarily of groundwater and precipitation. Pumping continues to support the landfill operations. In the future, water use for Sibley Quarry is expected to show no significant changes. Discharge rates are measured with a flow meter and withdrawals are considered equal to discharges since there is no consumptive use, just pure dewatering.
About the same
0
About the same
2081
About the same
2081

Comparison of withdrawals with previous reporting year

The water withdrawal and discharge is about the same as in previous year, about 2.9% higher in 2018 compared to 2017. Sibley Quarry is a limestone quarry that is currently not being actively mined. A Type III Low Hazard Industrial Landfill is being operated in portions of the quarry that have already been mined. The quarry is currently dewatered via the quarry sump, which consists primarily of groundwater and precipitation. Pumping continues to support the landfill operations. In the future, water use for Sibley Quarry is expected to show no significant changes. Discharge rates are measured with a flow meter and withdrawals are considered equal to discharges since there is no consumptive use, just pure dewatering.
About the same
0
About the same
2081

About the same

Total water discharges at this facility (megaliters/year)

The water withdrawal and discharge is about the same as in previous year, about 2.9% higher in 2018 compared to 2017. Sibley Quarry is a limestone quarry that is currently not being actively mined. A Type III Low Hazard Industrial Landfill is being operated in portions of the quarry that have already been mined. The quarry is currently dewatered via the quarry sump, which consists primarily of groundwater and precipitation. Pumping continues to support the landfill operations. In the future, water use for Sibley Quarry is expected to show no significant changes. Discharge rates are measured with a flow meter and withdrawals are considered equal to discharges since there is no consumptive use, just pure dewatering.
About the same
0
About the same
2081

Comparison of discharges with previous reporting year

The water withdrawal and discharge is about the same as in previous year, about 2.9% higher in 2018 compared to 2017. Sibley Quarry is a limestone quarry that is currently not being actively mined. A Type III Low Hazard Industrial Landfill is being operated in portions of the quarry that have already been mined. The quarry is currently dewatered via the quarry sump, which consists primarily of groundwater and precipitation. Pumping continues to support the landfill operations. In the future, water use for Sibley Quarry is expected to show no significant changes. Discharge rates are measured with a flow meter and withdrawals are considered equal to discharges since there is no consumptive use, just pure dewatering.
About the same
0
About the same

Total water consumption at this facility (megaliters/year)

The water withdrawal and discharge is about the same as in previous year, about 2.9% higher in 2018 compared to 2017. Sibley Quarry is a limestone quarry that is currently not being actively mined. A Type III Low Hazard Industrial Landfill is being operated in portions of the quarry that have already been mined. The quarry is currently dewatered via the quarry sump, which consists primarily of groundwater and precipitation. Pumping continues to support the landfill operations. In the future, water use for Sibley Quarry is expected to show no significant changes. Discharge rates are measured with a flow meter and withdrawals are considered equal to discharges since there is no consumptive use, just pure dewatering.
About the same
0

Comparison of consumption with previous reporting year

The water withdrawal and discharge is about the same as in previous year, about 2.9% higher in 2018 compared to 2017. Sibley Quarry is a limestone quarry that is currently not being actively mined. A Type III Low Hazard Industrial Landfill is being operated in portions of the quarry that have already been mined. The quarry is currently dewatered via the quarry sump, which consists primarily of groundwater and precipitation. Pumping continues to support the landfill operations. In the future, water use for Sibley Quarry is expected to show no significant changes. Discharge rates are measured with a flow meter and withdrawals are considered equal to discharges since there is no consumptive use, just pure dewatering.
About the same

Please explain

The water withdrawal and discharge is about the same as in previous year, about 2.9% higher in 2018 compared to 2017. Sibley Quarry is a limestone quarry that is currently not being actively mined. A Type III Low Hazard Industrial Landfill is being operated in portions of the quarry that have already been mined. The quarry is currently dewatered via the quarry sump, which consists primarily of groundwater and precipitation. Pumping continues to support the landfill operations. In the future, water use for Sibley Quarry is expected to show no significant changes. Discharge rates are measured with a flow meter and withdrawals are considered equal to discharges since there is no consumptive use, just pure dewatering.

Facility reference number

In 2018 water withdrawal, discharge and consumption decreased by approximately 35%, 35% and 41%, respectively. The reduction was due to implementation of a more accurate monitoring system for water intake and discharge. Also, the reduction was due to an intentional effort to shut off pumps and save costs when cooling water was not required (e.g. when gas compressors are not running). W.C. Taggart Compressor Station provides natural gas to the market areas in Detroit, Mt. Pleasant, Carson City, Greenville, Lakeview, Vine, Muskegon, Ludington, and Belding. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The Taggart Compressor Station is expected to maintain the general levels of water consumption as were recorded in 2018.
Lower
13
Lower
8488
Lower
8501
<Not Applicable>
Not applicable
-85.143392
43.442612
St. Lawrence
United States of America
Taggart Compressor Station
Facility 11

Facility name (optional)

In 2018 water withdrawal, discharge and consumption decreased by approximately 35%, 35% and 41%, respectively. The reduction was due to implementation of a more accurate monitoring system for water intake and discharge. Also, the reduction was due to an intentional effort to shut off pumps and save costs when cooling water was not required (e.g. when gas compressors are not running). W.C. Taggart Compressor Station provides natural gas to the market areas in Detroit, Mt. Pleasant, Carson City, Greenville, Lakeview, Vine, Muskegon, Ludington, and Belding. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The Taggart Compressor Station is expected to maintain the general levels of water consumption as were recorded in 2018.
Lower
13
Lower
8488
Lower

8501
<Not Applicable>
Not applicable
-85.143392
43.442612
St. Lawrence
United States of America
Taggart Compressor Station

Country/Region

In 2018 water withdrawal, discharge and consumption decreased by approximately 35%, 35% and 41%, respectively. The reduction was due to implementation of a more accurate monitoring system for water intake and discharge. Also, the reduction was due to an intentional effort to shut off pumps and save costs when cooling water was not required (e.g. when gas compressors are not running). W.C. Taggart Compressor Station provides natural gas to the market areas in Detroit, Mt. Pleasant, Carson City, Greenville, Lakeview, Vine, Muskegon, Ludington, and Belding. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The Taggart Compressor Station is expected to maintain the general levels of water consumption as were recorded in 2018.
Lower
13
Lower
8488
Lower
8501
<Not Applicable>
Not applicable
-85.143392
43.442612
St. Lawrence
United States of America

River basin

In 2018 water withdrawal, discharge and consumption decreased by approximately 35%, 35% and 41%, respectively. The reduction was due to implementation of a more accurate monitoring system for water intake and discharge. Also, the reduction was due to an intentional effort to shut off pumps and save costs when cooling water was not required (e.g. when gas compressors are not running). W.C. Taggart Compressor Station provides natural gas to the market areas in Detroit, Mt. Pleasant, Carson City, Greenville, Lakeview, Vine, Muskegon, Ludington, and Belding. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The Taggart Compressor Station is expected to maintain the general levels of water consumption as were recorded in 2018.
Lower
13
Lower
8488
Lower
8501
<Not Applicable>
Not applicable
-85.143392
43.442612
St. Lawrence

Latitude

In 2018 water withdrawal, discharge and consumption decreased by approximately 35%, 35% and 41%, respectively. The reduction was due to implementation of a more accurate monitoring system for water intake and discharge. Also, the reduction was due to an intentional effort to shut off pumps and save costs when cooling water was not required (e.g. when gas compressors are not running). W.C. Taggart Compressor Station provides natural gas to the market areas in Detroit, Mt. Pleasant, Carson City, Greenville, Lakeview, Vine, Muskegon, Ludington, and Belding. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The Taggart Compressor Station is expected to maintain the general levels of water consumption as were recorded in 2018.
Lower
13
Lower
8488
Lower
8501
<Not Applicable>
Not applicable
-85.143392
43.442612

Longitude

In 2018 water withdrawal, discharge and consumption decreased by approximately 35%, 35% and 41%, respectively. The reduction was due to implementation of a more accurate monitoring system for water intake and discharge. Also, the reduction was due to an intentional effort to shut off pumps and save costs when cooling water was not required (e.g. when gas compressors are not running). W.C. Taggart Compressor Station provides natural gas to the market areas in Detroit, Mt. Pleasant, Carson City, Greenville, Lakeview, Vine, Muskegon, Ludington, and Belding. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The Taggart Compressor Station is expected to maintain the general levels of water consumption as were recorded in 2018.
Lower
13
Lower
8488
Lower

8501
<Not Applicable>
Not applicable
-85.143392

Primary power generation source for your electricity generation at this facility

In 2018 water withdrawal, discharge and consumption decreased by approximately 35%, 35% and 41%, respectively. The reduction was due to implementation of a more accurate monitoring system for water intake and discharge. Also, the reduction was due to an intentional effort to shut off pumps and save costs when cooling water was not required (e.g. when gas compressors are not running). W.C. Taggart Compressor Station provides natural gas to the market areas in Detroit, Mt. Pleasant, Carson City, Greenville, Lakeview, Vine, Muskegon, Ludington, and Belding. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The Taggart Compressor Station is expected to maintain the general levels of water consumption as were recorded in 2018.
Lower
13
Lower
8488
Lower
8501
<Not Applicable>
Not applicable

Oil & gas sector business division

In 2018 water withdrawal, discharge and consumption decreased by approximately 35%, 35% and 41%, respectively. The reduction was due to implementation of a more accurate monitoring system for water intake and discharge. Also, the reduction was due to an intentional effort to shut off pumps and save costs when cooling water was not required (e.g. when gas compressors are not running). W.C. Taggart Compressor Station provides natural gas to the market areas in Detroit, Mt. Pleasant, Carson City, Greenville, Lakeview, Vine, Muskegon, Ludington, and Belding. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The Taggart Compressor Station is expected to maintain the general levels of water consumption as were recorded in 2018.
Lower
13
Lower
8488
Lower
8501
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

In 2018 water withdrawal, discharge and consumption decreased by approximately 35%, 35% and 41%, respectively. The reduction was due to implementation of a more accurate monitoring system for water intake and discharge. Also, the reduction was due to an intentional effort to shut off pumps and save costs when cooling water was not required (e.g. when gas compressors are not running). W.C. Taggart Compressor Station provides natural gas to the market areas in Detroit, Mt. Pleasant, Carson City, Greenville, Lakeview, Vine, Muskegon, Ludington, and Belding. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The Taggart Compressor Station is expected to maintain the general levels of water consumption as were recorded in 2018.
Lower
13
Lower
8488
Lower
8501

Comparison of withdrawals with previous reporting year

In 2018 water withdrawal, discharge and consumption decreased by approximately 35%, 35% and 41%, respectively. The reduction was due to implementation of a more accurate monitoring system for water intake and discharge. Also, the reduction was due to an intentional effort to shut off pumps and save costs when cooling water was not required (e.g. when gas compressors are not running). W.C. Taggart Compressor Station provides natural gas to the market areas in Detroit, Mt. Pleasant, Carson City, Greenville, Lakeview, Vine, Muskegon, Ludington, and Belding. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The Taggart Compressor Station is expected to maintain the general levels of water consumption as were recorded in 2018.
Lower
13
Lower
8488
Lower

Total water discharges at this facility (megaliters/year)

In 2018 water withdrawal, discharge and consumption decreased by approximately 35%, 35% and 41%, respectively. The reduction was due to implementation of a more accurate monitoring system for water intake and discharge. Also, the reduction was due to an intentional effort to shut off pumps and save costs when cooling water was not required (e.g. when gas compressors are not running). W.C. Taggart Compressor Station provides natural gas to the market areas in Detroit, Mt. Pleasant, Carson City, Greenville, Lakeview, Vine, Muskegon, Ludington, and Belding. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The Taggart Compressor Station is expected to maintain the general levels of water consumption as were recorded in 2018.
Lower
13
Lower
8488

Comparison of discharges with previous reporting year

In 2018 water withdrawal, discharge and consumption decreased by approximately 35%, 35% and 41%, respectively. The reduction was due to implementation of a more accurate monitoring system for water intake and discharge. Also, the reduction was due to an intentional effort to shut off pumps and save costs when cooling water was not

required (e.g. when gas compressors are not running). W.C. Taggart Compressor Station provides natural gas to the market areas in Detroit, Mt. Pleasant, Carson City, Greenville, Lakeview, Vine, Muskegon, Ludington, and Belding. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The Taggart Compressor Station is expected to maintain the general levels of water consumption as were recorded in 2018.
Lower
13
Lower

Total water consumption at this facility (megaliters/year)

In 2018 water withdrawal, discharge and consumption decreased by approximately 35%, 35% and 41%, respectively. The reduction was due to implementation of a more accurate monitoring system for water intake and discharge. Also, the reduction was due to an intentional effort to shut off pumps and save costs when cooling water was not required (e.g. when gas compressors are not running). W.C. Taggart Compressor Station provides natural gas to the market areas in Detroit, Mt. Pleasant, Carson City, Greenville, Lakeview, Vine, Muskegon, Ludington, and Belding. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The Taggart Compressor Station is expected to maintain the general levels of water consumption as were recorded in 2018.
Lower
13

Comparison of consumption with previous reporting year

In 2018 water withdrawal, discharge and consumption decreased by approximately 35%, 35% and 41%, respectively. The reduction was due to implementation of a more accurate monitoring system for water intake and discharge. Also, the reduction was due to an intentional effort to shut off pumps and save costs when cooling water was not required (e.g. when gas compressors are not running). W.C. Taggart Compressor Station provides natural gas to the market areas in Detroit, Mt. Pleasant, Carson City, Greenville, Lakeview, Vine, Muskegon, Ludington, and Belding. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The Taggart Compressor Station is expected to maintain the general levels of water consumption as were recorded in 2018.
Lower

Please explain

In 2018 water withdrawal, discharge and consumption decreased by approximately 35%, 35% and 41%, respectively. The reduction was due to implementation of a more accurate monitoring system for water intake and discharge. Also, the reduction was due to an intentional effort to shut off pumps and save costs when cooling water was not required (e.g. when gas compressors are not running). W.C. Taggart Compressor Station provides natural gas to the market areas in Detroit, Mt. Pleasant, Carson City, Greenville, Lakeview, Vine, Muskegon, Ludington, and Belding. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The Taggart Compressor Station is expected to maintain the general levels of water consumption as were recorded in 2018.

Facility reference number

Water withdrawal and discharge both decreased approximately 28% from 2017 to 2018 due to extensive maintenance outages in the 2nd and 4th quarter. Water consumption decreased approximately 36% from 2017 to 2018. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
Lower
1745
Lower
218097
Lower
219383
<Not Applicable>
Coal - hard
-83.181633
42.123024
St. Lawrence
United States of America
Trenton Channel Power Plant
Facility 12

Facility name (optional)

Water withdrawal and discharge both decreased approximately 28% from 2017 to 2018 due to extensive maintenance outages in the 2nd and 4th quarter. Water consumption decreased approximately 36% from 2017 to 2018. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
Lower
1745
Lower
218097
Lower
219383
<Not Applicable>
Coal - hard
-83.181633
42.123024
St. Lawrence
United States of America
Trenton Channel Power Plant

Country/Region

Water withdrawal and discharge both decreased approximately 28% from 2017 to 2018 due to extensive maintenance outages in the 2nd and 4th quarter. Water

consumption decreased approximately 36% from 2017 to 2018. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
Lower
1745
Lower
218097
Lower
219383
<Not Applicable>
Coal - hard
-83.181633
42.123024
St. Lawrence
United States of America

River basin

Water withdrawal and discharge both decreased approximately 28% from 2017 to 2018 due to extensive maintenance outages in the 2nd and 4th quarter. Water consumption decreased approximately 36% from 2017 to 2018. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
Lower
1745
Lower
218097
Lower
219383
<Not Applicable>
Coal - hard
-83.181633
42.123024
St. Lawrence

Latitude

Water withdrawal and discharge both decreased approximately 28% from 2017 to 2018 due to extensive maintenance outages in the 2nd and 4th quarter. Water consumption decreased approximately 36% from 2017 to 2018. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
Lower
1745
Lower
218097
Lower
219383
<Not Applicable>
Coal - hard
-83.181633
42.123024

Longitude

Water withdrawal and discharge both decreased approximately 28% from 2017 to 2018 due to extensive maintenance outages in the 2nd and 4th quarter. Water consumption decreased approximately 36% from 2017 to 2018. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
Lower
1745
Lower
218097
Lower
219383
<Not Applicable>
Coal - hard
-83.181633

Primary power generation source for your electricity generation at this facility

Water withdrawal and discharge both decreased approximately 28% from 2017 to 2018 due to extensive maintenance outages in the 2nd and 4th quarter. Water consumption decreased approximately 36% from 2017 to 2018. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
Lower
1745
Lower
218097
Lower
219383
<Not Applicable>
Coal - hard

Oil & gas sector business division
Water withdrawal and discharge both decreased approximately 28% from 2017 to 2018 due to extensive maintenance outages in the 2nd and 4th quarter. Water consumption decreased approximately 36% from 2017 to 2018. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
Lower
1745
Lower
218097
Lower
219383
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
Water withdrawal and discharge both decreased approximately 28% from 2017 to 2018 due to extensive maintenance outages in the 2nd and 4th quarter. Water consumption decreased approximately 36% from 2017 to 2018. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
Lower
1745
Lower
218097
Lower
219383

Comparison of withdrawals with previous reporting year
Water withdrawal and discharge both decreased approximately 28% from 2017 to 2018 due to extensive maintenance outages in the 2nd and 4th quarter. Water consumption decreased approximately 36% from 2017 to 2018. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
Lower
1745
Lower
218097
Lower

Total water discharges at this facility (megaliters/year)
Water withdrawal and discharge both decreased approximately 28% from 2017 to 2018 due to extensive maintenance outages in the 2nd and 4th quarter. Water consumption decreased approximately 36% from 2017 to 2018. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
Lower
1745
Lower
218097

Comparison of discharges with previous reporting year
Water withdrawal and discharge both decreased approximately 28% from 2017 to 2018 due to extensive maintenance outages in the 2nd and 4th quarter. Water consumption decreased approximately 36% from 2017 to 2018. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
Lower
1745
Lower

Total water consumption at this facility (megaliters/year)
Water withdrawal and discharge both decreased approximately 28% from 2017 to 2018 due to extensive maintenance outages in the 2nd and 4th quarter. Water consumption decreased approximately 36% from 2017 to 2018. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
Lower
1745

Comparison of consumption with previous reporting year
Water withdrawal and discharge both decreased approximately 28% from 2017 to 2018 due to extensive maintenance outages in the 2nd and 4th quarter. Water consumption decreased approximately 36% from 2017 to 2018. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.
Lower

Please explain
Water withdrawal and discharge both decreased approximately 28% from 2017 to 2018 due to extensive maintenance outages in the 2nd and 4th quarter. Water consumption decreased approximately 36% from 2017 to 2018. Water withdrawal is determined through a calculation involving river or lake intake, which is estimated from circulation pump nameplate capacity and run time. Evaporative loss is incorporated into the consumption figure; it is calculated using average monthly heat input, and regional and seasonal coefficients for evaporative loss. Discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.

Facility reference number

The total amount of withdrawal is based on invoices received from the municipal water supplier. The municipal water supplier does not provide a discrete amount of water discharged, therefore the amount of water discharged is equivalent to the amount of water withdrawn. The amount of water consumed has not been measured nor calculated for this facility. The water withdrawal and discharge has decreased by 4% from 2017. As the company adopts more water-efficient measures, such as low flow plumbing systems, the water withdrawals for this facility will continue to decrease.
About the same
0
About the same
144
About the same
144
<Not Applicable>
Not applicable
-83.05749
42.333846
St. Lawrence
United States of America
Company Headquarters
Facility 13

Facility name (optional)

The total amount of withdrawal is based on invoices received from the municipal water supplier. The municipal water supplier does not provide a discrete amount of water discharged, therefore the amount of water discharged is equivalent to the amount of water withdrawn. The amount of water consumed has not been measured nor calculated for this facility. The water withdrawal and discharge has decreased by 4% from 2017. As the company adopts more water-efficient measures, such as low flow plumbing systems, the water withdrawals for this facility will continue to decrease.
About the same
0
About the same
144
About the same
144
<Not Applicable>
Not applicable
-83.05749
42.333846
St. Lawrence
United States of America
Company Headquarters

Country/Region

The total amount of withdrawal is based on invoices received from the municipal water supplier. The municipal water supplier does not provide a discrete amount of water discharged, therefore the amount of water discharged is equivalent to the amount of water withdrawn. The amount of water consumed has not been measured nor calculated for this facility. The water withdrawal and discharge has decreased by 4% from 2017. As the company adopts more water-efficient measures, such as low flow plumbing systems, the water withdrawals for this facility will continue to decrease.
About the same
0
About the same
144
About the same
144
<Not Applicable>
Not applicable
-83.05749
42.333846
St. Lawrence
United States of America

River basin

The total amount of withdrawal is based on invoices received from the municipal water supplier. The municipal water supplier does not provide a discrete amount of water discharged, therefore the amount of water discharged is equivalent to the amount of water withdrawn. The amount of water consumed has not been measured nor calculated for this facility. The water withdrawal and discharge has decreased by 4% from 2017. As the company adopts more water-efficient measures, such as low flow plumbing systems, the water withdrawals for this facility will continue to decrease.
About the same
0
About the same
144
About the same
144
<Not Applicable>
Not applicable
-83.05749
42.333846
St. Lawrence

Latitude

The total amount of withdrawal is based on invoices received from the municipal water supplier. The municipal water supplier does not provide a discrete amount of water discharged, therefore the amount of water discharged is equivalent to the amount of water withdrawn. The amount of water consumed has not been measured nor calculated for this facility. The water withdrawal and discharge has decreased by 4% from 2017. As the company adopts more water-efficient measures, such as low flow plumbing systems, the water withdrawals for this facility will continue to decrease.
About the same
0
About the same

144
About the same
144
<Not Applicable>
Not applicable
-83.05749
42.333846

Longitude

The total amount of withdrawal is based on invoices received from the municipal water supplier. The municipal water supplier does not provide a discrete amount of water discharged, therefore the amount of water discharged is equivalent to the amount of water withdrawn. The amount of water consumed has not been measured nor calculated for this facility. The water withdrawal and discharge has decreased by 4% from 2017. As the company adopts more water-efficient measures, such as low flow plumbing systems, the water withdrawals for this facility will continue to decrease.
About the same
0
About the same
144
About the same
144
<Not Applicable>
Not applicable
-83.05749

Primary power generation source for your electricity generation at this facility

The total amount of withdrawal is based on invoices received from the municipal water supplier. The municipal water supplier does not provide a discrete amount of water discharged, therefore the amount of water discharged is equivalent to the amount of water withdrawn. The amount of water consumed has not been measured nor calculated for this facility. The water withdrawal and discharge has decreased by 4% from 2017. As the company adopts more water-efficient measures, such as low flow plumbing systems, the water withdrawals for this facility will continue to decrease.
About the same
0
About the same
144
About the same
144
<Not Applicable>
Not applicable

Oil & gas sector business division

The total amount of withdrawal is based on invoices received from the municipal water supplier. The municipal water supplier does not provide a discrete amount of water discharged, therefore the amount of water discharged is equivalent to the amount of water withdrawn. The amount of water consumed has not been measured nor calculated for this facility. The water withdrawal and discharge has decreased by 4% from 2017. As the company adopts more water-efficient measures, such as low flow plumbing systems, the water withdrawals for this facility will continue to decrease.
About the same
0
About the same
144
About the same
144
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

The total amount of withdrawal is based on invoices received from the municipal water supplier. The municipal water supplier does not provide a discrete amount of water discharged, therefore the amount of water discharged is equivalent to the amount of water withdrawn. The amount of water consumed has not been measured nor calculated for this facility. The water withdrawal and discharge has decreased by 4% from 2017. As the company adopts more water-efficient measures, such as low flow plumbing systems, the water withdrawals for this facility will continue to decrease.
About the same
0
About the same
144
About the same
144

Comparison of withdrawals with previous reporting year

The total amount of withdrawal is based on invoices received from the municipal water supplier. The municipal water supplier does not provide a discrete amount of water discharged, therefore the amount of water discharged is equivalent to the amount of water withdrawn. The amount of water consumed has not been measured nor calculated for this facility. The water withdrawal and discharge has decreased by 4% from 2017. As the company adopts more water-efficient measures, such as low flow plumbing systems, the water withdrawals for this facility will continue to decrease.
About the same
0
About the same
144
About the same

Total water discharges at this facility (megaliters/year)

The total amount of withdrawal is based on invoices received from the municipal water supplier. The municipal water supplier does not provide a discrete amount of water discharged, therefore the amount of water discharged is equivalent to the amount of water withdrawn. The amount of water consumed has not been measured nor calculated for this facility. The water withdrawal and discharge has decreased by 4% from 2017. As the company adopts more water-efficient measures, such as low flow plumbing systems, the water withdrawals for this facility will continue to decrease.
About the same
0
About the same
144

Comparison of discharges with previous reporting year

The total amount of withdrawal is based on invoices received from the municipal water supplier. The municipal water supplier does not provide a discrete amount of water discharged, therefore the amount of water discharged is equivalent to the amount of water withdrawn. The amount of water consumed has not been measured nor calculated for this facility. The water withdrawal and discharge has decreased by 4% from 2017. As the company adopts more water-efficient measures, such as low flow plumbing systems, the water withdrawals for this facility will continue to decrease.

About the same

0

About the same

Total water consumption at this facility (megaliters/year)

The total amount of withdrawal is based on invoices received from the municipal water supplier. The municipal water supplier does not provide a discrete amount of water discharged, therefore the amount of water discharged is equivalent to the amount of water withdrawn. The amount of water consumed has not been measured nor calculated for this facility. The water withdrawal and discharge has decreased by 4% from 2017. As the company adopts more water-efficient measures, such as low flow plumbing systems, the water withdrawals for this facility will continue to decrease.

About the same

0

Comparison of consumption with previous reporting year

The total amount of withdrawal is based on invoices received from the municipal water supplier. The municipal water supplier does not provide a discrete amount of water discharged, therefore the amount of water discharged is equivalent to the amount of water withdrawn. The amount of water consumed has not been measured nor calculated for this facility. The water withdrawal and discharge has decreased by 4% from 2017. As the company adopts more water-efficient measures, such as low flow plumbing systems, the water withdrawals for this facility will continue to decrease.

About the same

Please explain

The total amount of withdrawal is based on invoices received from the municipal water supplier. The municipal water supplier does not provide a discrete amount of water discharged, therefore the amount of water discharged is equivalent to the amount of water withdrawn. The amount of water consumed has not been measured nor calculated for this facility. The water withdrawal and discharge has decreased by 4% from 2017. As the company adopts more water-efficient measures, such as low flow plumbing systems, the water withdrawals for this facility will continue to decrease.

W5.1a

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

Facility reference number

This facility withdraws water from the St. Clair River as its surface water source. Withdrawals are estimated from circulation pump nameplate capacity and run time. The facility also withdraws municipal water primarily for sanitary use, but the volume has not been reported. Based on 2018's withdrawals and future projections, surface water withdrawal is expected to stay the same for the next decade. DTE owns 81% of the Belle River Power Plant; however, values reported here encompass the entire plant.

0

0

0

0

0

730430

Belle River Power Plant

Facility 1

Facility name

This facility withdraws water from the St. Clair River as its surface water source. Withdrawals are estimated from circulation pump nameplate capacity and run time. The facility also withdraws municipal water primarily for sanitary use, but the volume has not been reported. Based on 2018's withdrawals and future projections, surface water withdrawal is expected to stay the same for the next decade. DTE owns 81% of the Belle River Power Plant; however, values reported here encompass the entire plant.

0

0

0

0

0

730430

Belle River Power Plant

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

This facility withdraws water from the St. Clair River as its surface water source. Withdrawals are estimated from circulation pump nameplate capacity and run time. The facility also withdraws municipal water primarily for sanitary use, but the volume has not been reported. Based on 2018's withdrawals and future projections, surface water withdrawal is expected to stay the same for the next decade. DTE owns 81% of the Belle River Power Plant; however, values reported here encompass the entire plant.

0

0

0

0

0

730430

Brackish surface water/seawater

This facility withdraws water from the St. Clair River as its surface water source. Withdrawals are estimated from circulation pump nameplate capacity and run time. The facility also withdraws municipal water primarily for sanitary use, but the volume has not been reported. Based on 2018's withdrawals and future projections, surface water withdrawal is expected to stay the same for the next decade. DTE owns 81% of the Belle River Power Plant; however, values reported here encompass the entire plant.

0

0

0

0

0

Groundwater - renewable

This facility withdraws water from the St. Clair River as its surface water source. Withdrawals are estimated from circulation pump nameplate capacity and run time. The facility also withdraws municipal water primarily for sanitary use, but the volume has not been reported. Based on 2018's withdrawals and future projections, surface water withdrawal is expected to stay the same for the next decade. DTE owns 81% of the Belle River Power Plant; however, values reported here encompass the entire plant.
0
0
0
0

Groundwater - non-renewable

This facility withdraws water from the St. Clair River as its surface water source. Withdrawals are estimated from circulation pump nameplate capacity and run time. The facility also withdraws municipal water primarily for sanitary use, but the volume has not been reported. Based on 2018's withdrawals and future projections, surface water withdrawal is expected to stay the same for the next decade. DTE owns 81% of the Belle River Power Plant; however, values reported here encompass the entire plant.
0
0
0

Produced/Entrained water

This facility withdraws water from the St. Clair River as its surface water source. Withdrawals are estimated from circulation pump nameplate capacity and run time. The facility also withdraws municipal water primarily for sanitary use, but the volume has not been reported. Based on 2018's withdrawals and future projections, surface water withdrawal is expected to stay the same for the next decade. DTE owns 81% of the Belle River Power Plant; however, values reported here encompass the entire plant.
0
0

Third party sources

This facility withdraws water from the St. Clair River as its surface water source. Withdrawals are estimated from circulation pump nameplate capacity and run time. The facility also withdraws municipal water primarily for sanitary use, but the volume has not been reported. Based on 2018's withdrawals and future projections, surface water withdrawal is expected to stay the same for the next decade. DTE owns 81% of the Belle River Power Plant; however, values reported here encompass the entire plant.
0

Comment

This facility withdraws water from the St. Clair River as its surface water source. Withdrawals are estimated from circulation pump nameplate capacity and run time. The facility also withdraws municipal water primarily for sanitary use, but the volume has not been reported. Based on 2018's withdrawals and future projections, surface water withdrawal is expected to stay the same for the next decade. DTE owns 81% of the Belle River Power Plant; however, values reported here encompass the entire plant.

Facility reference number

This facility no longer generates electric power and is currently being retired. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. Withdrawal volumes are expected to remain at 0.
0
0
0
0
0
0
Conners Creek Power Plant
Facility 2

Facility name

This facility no longer generates electric power and is currently being retired. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. Withdrawal volumes are expected to remain at 0.
0
0
0
0
0
0
Conners Creek Power Plant

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

This facility no longer generates electric power and is currently being retired. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. Withdrawal volumes are expected to remain at 0.
0
0
0
0
0
0

Brackish surface water/seawater

This facility no longer generates electric power and is currently being retired. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. Withdrawal volumes are expected to remain at 0.
0
0
0
0
0

Groundwater - renewable

This facility no longer generates electric power and is currently being retired. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. Withdrawal volumes are expected to remain at 0.
0
0
0
0

Groundwater - non-renewable
This facility no longer generates electric power and is currently being retired. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. Withdrawal volumes are expected to remain at 0.
0
0
0

Produced/Entrained water
This facility no longer generates electric power and is currently being retired. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. Withdrawal volumes are expected to remain at 0.
0
0

Third party sources
This facility no longer generates electric power and is currently being retired. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. Withdrawal volumes are expected to remain at 0.
0

Comment
This facility no longer generates electric power and is currently being retired. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. Withdrawal volumes are expected to remain at 0.

Facility reference number
Fresh surface water is withdrawn from Lake Erie; the volume is determined by calculating discharge (through run time and number of discharge pumps) and adding this to the calculated consumption value. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. In future, this facility's water use is expected to remain relatively constant.
0
0
0
0
0
56119
Fermi 2 Power Plant
Facility 3

Facility name
Fresh surface water is withdrawn from Lake Erie; the volume is determined by calculating discharge (through run time and number of discharge pumps) and adding this to the calculated consumption value. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. In future, this facility's water use is expected to remain relatively constant.
0
0
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0
0
56119
Fermi 2 Power Plant

Fresh surface water, including rainwater, water from wetlands, rivers and lakes
Fresh surface water is withdrawn from Lake Erie; the volume is determined by calculating discharge (through run time and number of discharge pumps) and adding this to the calculated consumption value. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. In future, this facility's water use is expected to remain relatively constant.
0
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56119

Brackish surface water/seawater
Fresh surface water is withdrawn from Lake Erie; the volume is determined by calculating discharge (through run time and number of discharge pumps) and adding this to the calculated consumption value. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. In future, this facility's water use is expected to remain relatively constant.
0
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0

Groundwater - renewable
Fresh surface water is withdrawn from Lake Erie; the volume is determined by calculating discharge (through run time and number of discharge pumps) and adding this to the calculated consumption value. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. In future, this facility's water use is expected to remain relatively constant.
0
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Groundwater - non-renewable
Fresh surface water is withdrawn from Lake Erie; the volume is determined by calculating discharge (through run time and number of discharge pumps) and adding this to the calculated consumption value. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. In future, this facility's water use is expected to remain relatively constant.
0
0
0

Produced/Entrained water

Fresh surface water is withdrawn from Lake Erie; the volume is determined by calculating discharge (through run time and number of discharge pumps) and adding this to the calculated consumption value. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. In future, this facility's water use is expected to remain relatively constant.

0

0

Third party sources

Fresh surface water is withdrawn from Lake Erie; the volume is determined by calculating discharge (through run time and number of discharge pumps) and adding this to the calculated consumption value. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. In future, this facility's water use is expected to remain relatively constant.

0

Comment

Fresh surface water is withdrawn from Lake Erie; the volume is determined by calculating discharge (through run time and number of discharge pumps) and adding this to the calculated consumption value. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. In future, this facility's water use is expected to remain relatively constant.

Facility reference number

This facility withdraws mostly municipal water for both cooling water make up and for sanitary use. Small amounts of fresh surface water from Jackson Drain are used as makeup water at times. The number reported only represents the amount of municipal supply that is used for cooling water purposes. This value is determined through water metering. In the future, the withdrawal volume is expected to stay the same.

439

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Greenwood Energy Center

Facility 4

Facility name

This facility withdraws mostly municipal water for both cooling water make up and for sanitary use. Small amounts of fresh surface water from Jackson Drain are used as makeup water at times. The number reported only represents the amount of municipal supply that is used for cooling water purposes. This value is determined through water metering. In the future, the withdrawal volume is expected to stay the same.

439

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Greenwood Energy Center

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

This facility withdraws mostly municipal water for both cooling water make up and for sanitary use. Small amounts of fresh surface water from Jackson Drain are used as makeup water at times. The number reported only represents the amount of municipal supply that is used for cooling water purposes. This value is determined through water metering. In the future, the withdrawal volume is expected to stay the same.

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Brackish surface water/seawater

This facility withdraws mostly municipal water for both cooling water make up and for sanitary use. Small amounts of fresh surface water from Jackson Drain are used as makeup water at times. The number reported only represents the amount of municipal supply that is used for cooling water purposes. This value is determined through water metering. In the future, the withdrawal volume is expected to stay the same.

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Groundwater - renewable

This facility withdraws mostly municipal water for both cooling water make up and for sanitary use. Small amounts of fresh surface water from Jackson Drain are used as makeup water at times. The number reported only represents the amount of municipal supply that is used for cooling water purposes. This value is determined through water metering. In the future, the withdrawal volume is expected to stay the same.

439

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Groundwater - non-renewable

This facility withdraws mostly municipal water for both cooling water make up and for sanitary use. Small amounts of fresh surface water from Jackson Drain are used as makeup water at times. The number reported only represents the amount of municipal supply that is used for cooling water purposes. This value is determined through water metering. In the future, the withdrawal volume is expected to stay the same.

439

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0

Produced/Entrained water

This facility withdraws mostly municipal water for both cooling water make up and for sanitary use. Small amounts of fresh surface water from Jackson Drain are used as

makeup water at times. The number reported only represents the amount of municipal supply that is used for cooling water purposes. This value is determined through water metering. In the future, the withdrawal volume is expected to stay the same.
439
0

Third party sources
This facility withdraws mostly municipal water for both cooling water make up and for sanitary use. Small amounts of fresh surface water from Jackson Drain are used as makeup water at times. The number reported only represents the amount of municipal supply that is used for cooling water purposes. This value is determined through water metering. In the future, the withdrawal volume is expected to stay the same.
439

Comment
This facility withdraws mostly municipal water for both cooling water make up and for sanitary use. Small amounts of fresh surface water from Jackson Drain are used as makeup water at times. The number reported only represents the amount of municipal supply that is used for cooling water purposes. This value is determined through water metering. In the future, the withdrawal volume is expected to stay the same.

Facility reference number
This facility no longer generates electric power and is in the process of being retired. This facility withdraws municipal water for sanitary use, but the volume has not been reported. This facility was sold in 2019.
0
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Harbor Beach Power Plant
Facility 5

Facility name
This facility no longer generates electric power and is in the process of being retired. This facility withdraws municipal water for sanitary use, but the volume has not been reported. This facility was sold in 2019.
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Harbor Beach Power Plant

Fresh surface water, including rainwater, water from wetlands, rivers and lakes
This facility no longer generates electric power and is in the process of being retired. This facility withdraws municipal water for sanitary use, but the volume has not been reported. This facility was sold in 2019.
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Brackish surface water/seawater
This facility no longer generates electric power and is in the process of being retired. This facility withdraws municipal water for sanitary use, but the volume has not been reported. This facility was sold in 2019.
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Groundwater - renewable
This facility no longer generates electric power and is in the process of being retired. This facility withdraws municipal water for sanitary use, but the volume has not been reported. This facility was sold in 2019.
0
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Groundwater - non-renewable
This facility no longer generates electric power and is in the process of being retired. This facility withdraws municipal water for sanitary use, but the volume has not been reported. This facility was sold in 2019.
0
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0

Produced/Entrained water
This facility no longer generates electric power and is in the process of being retired. This facility withdraws municipal water for sanitary use, but the volume has not been reported. This facility was sold in 2019.
0
0

Third party sources
This facility no longer generates electric power and is in the process of being retired. This facility withdraws municipal water for sanitary use, but the volume has not been reported. This facility was sold in 2019.
0

Comment

This facility no longer generates electric power and is in the process of being retired. This facility withdraws municipal water for sanitary use, but the volume has not been reported. This facility was sold in 2019.

Facility reference number

Monroe withdraws water from Lake Erie and River Raisin; the volume is estimated by pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The Monroe Power Plant is expected to operate until 2040. The discharge may decrease in time with the implementation of the new ELG requirements.

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2103642
Monroe Power Plant
Facility 7

Facility name

Monroe withdraws water from Lake Erie and River Raisin; the volume is estimated by pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The Monroe Power Plant is expected to operate until 2040. The discharge may decrease in time with the implementation of the new ELG requirements.

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2103642
Monroe Power Plant

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

Monroe withdraws water from Lake Erie and River Raisin; the volume is estimated by pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The Monroe Power Plant is expected to operate until 2040. The discharge may decrease in time with the implementation of the new ELG requirements.

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2103642

Brackish surface water/seawater

Monroe withdraws water from Lake Erie and River Raisin; the volume is estimated by pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The Monroe Power Plant is expected to operate until 2040. The discharge may decrease in time with the implementation of the new ELG requirements.

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Groundwater - renewable

Monroe withdraws water from Lake Erie and River Raisin; the volume is estimated by pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The Monroe Power Plant is expected to operate until 2040. The discharge may decrease in time with the implementation of the new ELG requirements.

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Groundwater - non-renewable

Monroe withdraws water from Lake Erie and River Raisin; the volume is estimated by pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The Monroe Power Plant is expected to operate until 2040. The discharge may decrease in time with the implementation of the new ELG requirements.

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Produced/Entrained water

Monroe withdraws water from Lake Erie and River Raisin; the volume is estimated by pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The Monroe Power Plant is expected to operate until 2040. The discharge may decrease in time with the implementation of the new ELG requirements.

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0

Third party sources

Monroe withdraws water from Lake Erie and River Raisin; the volume is estimated by pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The Monroe Power Plant is expected to operate until 2040. The discharge may decrease in time with the implementation of the new ELG requirements.

0

Comment

Monroe withdraws water from Lake Erie and River Raisin; the volume is estimated by pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The Monroe Power Plant is expected to operate until 2040. The discharge may decrease in time with the implementation of the new ELG requirements.

Facility reference number

Fresh surface water is withdrawn from Detroit River; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The River Rouge Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.

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162088
River Rouge Power Plant
Facility 8

Facility name

Fresh surface water is withdrawn from Detroit River; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The River Rouge Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.

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162088
River Rouge Power Plant

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

Fresh surface water is withdrawn from Detroit River; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The River Rouge Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.

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162088

Brackish surface water/seawater

Fresh surface water is withdrawn from Detroit River; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The River Rouge Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.

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0

Groundwater - renewable

Fresh surface water is withdrawn from Detroit River; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The River Rouge Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.

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Groundwater - non-renewable

Fresh surface water is withdrawn from Detroit River; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The River Rouge Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.

0
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Produced/Entrained water

Fresh surface water is withdrawn from Detroit River; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The River Rouge Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.

0
0

Third party sources

Fresh surface water is withdrawn from Detroit River; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The River Rouge Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.

0

Comment

Fresh surface water is withdrawn from Detroit River; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The River Rouge Power Plant is expected to be retired by 2023; therefore, withdrawals, consumption, and discharge will trend downward and then go to 0 once the plant is retired.

Facility reference number

Fresh surface water is withdrawn from the St. Clair River; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals will trend downward and then go to 0 once the plant is retired.
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1008484
St. Clair Power Plant
Facility 9

Facility name

Fresh surface water is withdrawn from the St. Clair River; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals will trend downward and then go to 0 once the plant is retired.
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1008484
St. Clair Power Plant

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

Fresh surface water is withdrawn from the St. Clair River; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals will trend downward and then go to 0 once the plant is retired.
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1008484

Brackish surface water/seawater

Fresh surface water is withdrawn from the St. Clair River; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals will trend downward and then go to 0 once the plant is retired.
0
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0

Groundwater - renewable

Fresh surface water is withdrawn from the St. Clair River; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals will trend downward and then go to 0 once the plant is retired.
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Groundwater - non-renewable

Fresh surface water is withdrawn from the St. Clair River; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals will trend downward and then go to 0 once the plant is retired.
0
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0

Produced/Entrained water

Fresh surface water is withdrawn from the St. Clair River; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals will trend downward and then go to 0 once the plant is retired.
0
0

Third party sources

Fresh surface water is withdrawn from the St. Clair River; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals will trend downward and then go to 0 once the plant is retired.
0

Comment

Fresh surface water is withdrawn from the St. Clair River; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The St. Clair Power Plant is expected to be retired by 2023; therefore, withdrawals will trend downward and then go to 0 once the plant is retired.

Facility reference number

Sibley Quarry withdraws water from groundwater sources; the volume is considered equal to the volume of discharged water, which is determined from the measured discharges flow rate and operation time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. In the future, withdrawals from Sibley Quarry are expected to stay the same.

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2081
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0
Sibley Quarry
Facility 10

Facility name

Sibley Quarry withdraws water from groundwater sources; the volume is considered equal to the volume of discharged water, which is determined from the measured discharges flow rate and operation time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. In the future, withdrawals from Sibley Quarry are expected to stay the same.
0
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2081
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Sibley Quarry

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

Sibley Quarry withdraws water from groundwater sources; the volume is considered equal to the volume of discharged water, which is determined from the measured discharges flow rate and operation time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. In the future, withdrawals from Sibley Quarry are expected to stay the same.
0
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2081
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0

Brackish surface water/seawater

Sibley Quarry withdraws water from groundwater sources; the volume is considered equal to the volume of discharged water, which is determined from the measured discharges flow rate and operation time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. In the future, withdrawals from Sibley Quarry are expected to stay the same.
0
0
0
2081
0

Groundwater - renewable

Sibley Quarry withdraws water from groundwater sources; the volume is considered equal to the volume of discharged water, which is determined from the measured discharges flow rate and operation time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. In the future, withdrawals from Sibley Quarry are expected to stay the same.
0
0
0
2081

Groundwater - non-renewable

Sibley Quarry withdraws water from groundwater sources; the volume is considered equal to the volume of discharged water, which is determined from the measured discharges flow rate and operation time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. In the future, withdrawals from Sibley Quarry are expected to stay the same.
0
0
0

Produced/Entrained water

Sibley Quarry withdraws water from groundwater sources; the volume is considered equal to the volume of discharged water, which is determined from the measured discharges flow rate and operation time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. In the future, withdrawals from Sibley Quarry are expected to stay the same.
0
0

Third party sources

Sibley Quarry withdraws water from groundwater sources; the volume is considered equal to the volume of discharged water, which is determined from the measured discharges flow rate and operation time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. In the future, withdrawals from Sibley Quarry are expected to stay the same.
0

Comment

Sibley Quarry withdraws water from groundwater sources; the volume is considered equal to the volume of discharged water, which is determined from the measured discharges flow rate and operation time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. In the future, withdrawals from Sibley Quarry are expected to stay the same.

Facility reference number

Fresh surface water is withdrawn from the First Lake and Second Lake of the Six Lakes Chain; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. In the future, withdrawals from the facility are expected to remain the same.
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8501
Taggart Compressor Station
Facility 11

Facility name
Fresh surface water is withdrawn from the First Lake and Second Lake of the Six Lakes Chain; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. In the future, withdrawals from the facility are expected to remain the same.
0
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8501
Taggart Compressor Station

Fresh surface water, including rainwater, water from wetlands, rivers and lakes
Fresh surface water is withdrawn from the First Lake and Second Lake of the Six Lakes Chain; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. In the future, withdrawals from the facility are expected to remain the same.
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8501

Brackish surface water/seawater
Fresh surface water is withdrawn from the First Lake and Second Lake of the Six Lakes Chain; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. In the future, withdrawals from the facility are expected to remain the same.
0
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0
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0

Groundwater - renewable
Fresh surface water is withdrawn from the First Lake and Second Lake of the Six Lakes Chain; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. In the future, withdrawals from the facility are expected to remain the same.
0
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0

Groundwater - non-renewable
Fresh surface water is withdrawn from the First Lake and Second Lake of the Six Lakes Chain; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. In the future, withdrawals from the facility are expected to remain the same.
0
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0

Produced/Entrained water
Fresh surface water is withdrawn from the First Lake and Second Lake of the Six Lakes Chain; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. In the future, withdrawals from the facility are expected to remain the same.
0
0

Third party sources
Fresh surface water is withdrawn from the First Lake and Second Lake of the Six Lakes Chain; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. In the future, withdrawals from the facility are expected to remain the same.
0

Comment
Fresh surface water is withdrawn from the First Lake and Second Lake of the Six Lakes Chain; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. In the future, withdrawals from the facility are expected to remain the same.

Facility reference number
Fresh surface water is withdrawn from the Detroit River; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The Trenton Channel Power Plant is expected to be retired by 2023; therefore, withdrawal volumes are expected to trend downward and fall to 0 once the plant is retired.
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219383
Trenton Channel Power Plant
Facility 12

Facility name

Fresh surface water is withdrawn from the Detroit River; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The Trenton Channel Power Plant is expected to be retired by 2023; therefore, withdrawal volumes are expected to trend downward and fall to 0 once the plant is retired.
0
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219383
Trenton Channel Power Plant

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

Fresh surface water is withdrawn from the Detroit River; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The Trenton Channel Power Plant is expected to be retired by 2023; therefore, withdrawal volumes are expected to trend downward and fall to 0 once the plant is retired.
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219383

Brackish surface water/seawater

Fresh surface water is withdrawn from the Detroit River; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The Trenton Channel Power Plant is expected to be retired by 2023; therefore, withdrawal volumes are expected to trend downward and fall to 0 once the plant is retired.
0
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Groundwater - renewable

Fresh surface water is withdrawn from the Detroit River; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The Trenton Channel Power Plant is expected to be retired by 2023; therefore, withdrawal volumes are expected to trend downward and fall to 0 once the plant is retired.
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Groundwater - non-renewable

Fresh surface water is withdrawn from the Detroit River; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The Trenton Channel Power Plant is expected to be retired by 2023; therefore, withdrawal volumes are expected to trend downward and fall to 0 once the plant is retired.
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Produced/Entrained water

Fresh surface water is withdrawn from the Detroit River; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The Trenton Channel Power Plant is expected to be retired by 2023; therefore, withdrawal volumes are expected to trend downward and fall to 0 once the plant is retired.
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Third party sources

Fresh surface water is withdrawn from the Detroit River; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The Trenton Channel Power Plant is expected to be retired by 2023; therefore, withdrawal volumes are expected to trend downward and fall to 0 once the plant is retired.
0

Comment

Fresh surface water is withdrawn from the Detroit River; the volume is calculated by circulation pump nameplate capacity and run time. This facility withdraws municipal water primarily for sanitary use, but the volume has not been reported. The Trenton Channel Power Plant is expected to be retired by 2023; therefore, withdrawal volumes are expected to trend downward and fall to 0 once the plant is retired.

Facility reference number

The total amount of withdrawal is based on invoices received from the municipal water supplier. 2018 calculations include water use from irrigation, pond, and cooling tower, which were not included in 2017 calculations. DTE projects that surface water withdrawals will continue to decrease in the future, as more water efficient systems are installed.
144
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DTE Headquarters

Facility 13

Facility name

The total amount of withdrawal is based on invoices received from the municipal water supplier. 2018 calculations include water use from irrigation, pond, and cooling tower, which were not included in 2017 calculations. DTE projects that surface water withdrawals will continue to decrease in the future, as more water efficient systems are installed.

144

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DTE Headquarters

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

The total amount of withdrawal is based on invoices received from the municipal water supplier. 2018 calculations include water use from irrigation, pond, and cooling tower, which were not included in 2017 calculations. DTE projects that surface water withdrawals will continue to decrease in the future, as more water efficient systems are installed.

144

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Brackish surface water/seawater

The total amount of withdrawal is based on invoices received from the municipal water supplier. 2018 calculations include water use from irrigation, pond, and cooling tower, which were not included in 2017 calculations. DTE projects that surface water withdrawals will continue to decrease in the future, as more water efficient systems are installed.

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Groundwater - renewable

The total amount of withdrawal is based on invoices received from the municipal water supplier. 2018 calculations include water use from irrigation, pond, and cooling tower, which were not included in 2017 calculations. DTE projects that surface water withdrawals will continue to decrease in the future, as more water efficient systems are installed.

144

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0

Groundwater - non-renewable

The total amount of withdrawal is based on invoices received from the municipal water supplier. 2018 calculations include water use from irrigation, pond, and cooling tower, which were not included in 2017 calculations. DTE projects that surface water withdrawals will continue to decrease in the future, as more water efficient systems are installed.

144

0

0

Produced/Entrained water

The total amount of withdrawal is based on invoices received from the municipal water supplier. 2018 calculations include water use from irrigation, pond, and cooling tower, which were not included in 2017 calculations. DTE projects that surface water withdrawals will continue to decrease in the future, as more water efficient systems are installed.

144

0

Third party sources

The total amount of withdrawal is based on invoices received from the municipal water supplier. 2018 calculations include water use from irrigation, pond, and cooling tower, which were not included in 2017 calculations. DTE projects that surface water withdrawals will continue to decrease in the future, as more water efficient systems are installed.

144

Comment

The total amount of withdrawal is based on invoices received from the municipal water supplier. 2018 calculations include water use from irrigation, pond, and cooling tower, which were not included in 2017 calculations. DTE projects that surface water withdrawals will continue to decrease in the future, as more water efficient systems are installed.

W5.1b

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

Facility reference number

Belle River discharges water to the St. Clair River; the volume is calculated by subtracting estimated consumption from estimated withdrawal. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported. DTE owns 81% of the Belle River Power Plant; however, values reported here encompass the entire plant.

0

0

0

722119
Belle River Power Plant
Facility 1

Facility name

Belle River discharges water to the St. Clair River; the volume is calculated by subtracting estimated consumption from estimated withdrawal. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported. DTE owns 81% of the Belle River Power Plant; however, values reported here encompass the entire plant.

0
0
0
722119
Belle River Power Plant

Fresh surface water

Belle River discharges water to the St. Clair River; the volume is calculated by subtracting estimated consumption from estimated withdrawal. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported. DTE owns 81% of the Belle River Power Plant; however, values reported here encompass the entire plant.

0
0
0
722119

Brackish surface water/Seawater

Belle River discharges water to the St. Clair River; the volume is calculated by subtracting estimated consumption from estimated withdrawal. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported. DTE owns 81% of the Belle River Power Plant; however, values reported here encompass the entire plant.

0
0
0

Groundwater

Belle River discharges water to the St. Clair River; the volume is calculated by subtracting estimated consumption from estimated withdrawal. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported. DTE owns 81% of the Belle River Power Plant; however, values reported here encompass the entire plant.

0
0

Third party destinations

Belle River discharges water to the St. Clair River; the volume is calculated by subtracting estimated consumption from estimated withdrawal. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported. DTE owns 81% of the Belle River Power Plant; however, values reported here encompass the entire plant.

0

Comment

Belle River discharges water to the St. Clair River; the volume is calculated by subtracting estimated consumption from estimated withdrawal. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported. DTE owns 81% of the Belle River Power Plant; however, values reported here encompass the entire plant.

Facility reference number

Conners Creek is in the process of being retired and discharges are minimal. They consist of groundwater and stormwater accumulating in the basement pf the plant. The plant discharges water to the Detroit River; the volume is calculated by multiplying the discharge pump flow rate with the length of time over which the discharge took place. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.

0
0
0
6
Conners Creek Power Plant
Facility 2

Facility name

Conners Creek is in the process of being retired and discharges are minimal. They consist of groundwater and stormwater accumulating in the basement pf the plant. The plant discharges water to the Detroit River; the volume is calculated by multiplying the discharge pump flow rate with the length of time over which the discharge took place. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.

0
0
0
6
Conners Creek Power Plant

Fresh surface water

Conners Creek is in the process of being retired and discharges are minimal. They consist of groundwater and stormwater accumulating in the basement pf the plant. The plant discharges water to the Detroit River; the volume is calculated by multiplying the discharge pump flow rate with the length of time over which the discharge took place. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.

0
0
0
6

Brackish surface water/Seawater

Conners Creek is in the process of being retired and discharges are minimal. They consist of groundwater and stormwater accumulating in the basement pf the plant. The plant discharges water to the Detroit River; the volume is calculated by multiplying the discharge pump flow rate with the length of time over which the discharge took place. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.

0

0
0

Groundwater
Conners Creek is in the process of being retired and discharges are minimal. They consist of groundwater and stormwater accumulating in the basement pf the plant. The plant discharges water to the Detroit River; the volume is calculated by multiplying the discharge pump flow rate with the length of time over which the discharge took place. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.
0
0

Third party destinations
Conners Creek is in the process of being retired and discharges are minimal. They consist of groundwater and stormwater accumulating in the basement pf the plant. The plant discharges water to the Detroit River; the volume is calculated by multiplying the discharge pump flow rate with the length of time over which the discharge took place. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.
0

Comment
Conners Creek is in the process of being retired and discharges are minimal. They consist of groundwater and stormwater accumulating in the basement pf the plant. The plant discharges water to the Detroit River; the volume is calculated by multiplying the discharge pump flow rate with the length of time over which the discharge took place. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.

Facility reference number
This facility discharges a portion of both process wastewater and sanitary water to a municipal/industrial wastewater treatment plant; however, only the amount of process wastewater is reported. Water is also discharged to Lake Erie; the volume is calculated through a calculation involving the number of discharge pumps and the run time.
30
0
0
31103
Fermi 2 Nuclear Power Plant
Facility 3

Facility name
This facility discharges a portion of both process wastewater and sanitary water to a municipal/industrial wastewater treatment plant; however, only the amount of process wastewater is reported. Water is also discharged to Lake Erie; the volume is calculated through a calculation involving the number of discharge pumps and the run time.
30
0
0
31103
Fermi 2 Nuclear Power Plant

Fresh surface water
This facility discharges a portion of both process wastewater and sanitary water to a municipal/industrial wastewater treatment plant; however, only the amount of process wastewater is reported. Water is also discharged to Lake Erie; the volume is calculated through a calculation involving the number of discharge pumps and the run time.
30
0
0
31103

Brackish surface water/Seawater
This facility discharges a portion of both process wastewater and sanitary water to a municipal/industrial wastewater treatment plant; however, only the amount of process wastewater is reported. Water is also discharged to Lake Erie; the volume is calculated through a calculation involving the number of discharge pumps and the run time.
30
0
0

Groundwater
This facility discharges a portion of both process wastewater and sanitary water to a municipal/industrial wastewater treatment plant; however, only the amount of process wastewater is reported. Water is also discharged to Lake Erie; the volume is calculated through a calculation involving the number of discharge pumps and the run time.
30
0

Third party destinations
This facility discharges a portion of both process wastewater and sanitary water to a municipal/industrial wastewater treatment plant; however, only the amount of process wastewater is reported. Water is also discharged to Lake Erie; the volume is calculated through a calculation involving the number of discharge pumps and the run time.
30

Comment
This facility discharges a portion of both process wastewater and sanitary water to a municipal/industrial wastewater treatment plant; however, only the amount of process wastewater is reported. Water is also discharged to Lake Erie; the volume is calculated through a calculation involving the number of discharge pumps and the run time.

Facility reference number
This facility discharges treated process and sanitary water to fresh surface water. Greenwood operates on a closed loop cooling water system, and in 2018 there was no discharge of treated process water to surface water. Treated sanitary water was discharged in May, October, and November 2018.
0
0
0
4.8
Greenwood Energy Center
Facility 4

Facility name
This facility discharges treated process and sanitary water to fresh surface water. Greenwood operates on a closed loop cooling water system, and in 2018 there was no discharge of treated process water to surface water. Treated sanitary water was discharged in May, October, and November 2018.
0

0
0
4.8
Greenwood Energy Center

Fresh surface water

This facility discharges treated process and sanitary water to fresh surface water. Greenwood operates on a closed loop cooling water system, and in 2018 there was no discharge of treated process water to surface water. Treated sanitary water was discharged in May, October, and November 2018.

0
0
0
4.8

Brackish surface water/Seawater

This facility discharges treated process and sanitary water to fresh surface water. Greenwood operates on a closed loop cooling water system, and in 2018 there was no discharge of treated process water to surface water. Treated sanitary water was discharged in May, October, and November 2018.

0
0
0

Groundwater

This facility discharges treated process and sanitary water to fresh surface water. Greenwood operates on a closed loop cooling water system, and in 2018 there was no discharge of treated process water to surface water. Treated sanitary water was discharged in May, October, and November 2018.

0
0

Third party destinations

This facility discharges treated process and sanitary water to fresh surface water. Greenwood operates on a closed loop cooling water system, and in 2018 there was no discharge of treated process water to surface water. Treated sanitary water was discharged in May, October, and November 2018.

0

Comment

This facility discharges treated process and sanitary water to fresh surface water. Greenwood operates on a closed loop cooling water system, and in 2018 there was no discharge of treated process water to surface water. Treated sanitary water was discharged in May, October, and November 2018.

Facility reference number

Harbor Beach is in the process of being retired and discharges are minimal. The plant discharges water to Lake Huron; the volume calculation involves pump rates and run time. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.

0
0
0
86
Harbor Beach Power Plant
Facility 5

Facility name

Harbor Beach is in the process of being retired and discharges are minimal. The plant discharges water to Lake Huron; the volume calculation involves pump rates and run time. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.

0
0
0
86
Harbor Beach Power Plant

Fresh surface water

Harbor Beach is in the process of being retired and discharges are minimal. The plant discharges water to Lake Huron; the volume calculation involves pump rates and run time. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.

0
0
0
86

Brackish surface water/Seawater

Harbor Beach is in the process of being retired and discharges are minimal. The plant discharges water to Lake Huron; the volume calculation involves pump rates and run time. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.

0
0
0

Groundwater

Harbor Beach is in the process of being retired and discharges are minimal. The plant discharges water to Lake Huron; the volume calculation involves pump rates and run time. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.

0
0

Third party destinations

Harbor Beach is in the process of being retired and discharges are minimal. The plant discharges water to Lake Huron; the volume calculation involves pump rates and run time. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.

0

Comment

Harbor Beach is in the process of being retired and discharges are minimal. The plant discharges water to Lake Huron; the volume calculation involves pump rates and run time. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.

Facility reference number

This facility discharges to Lake Erie; discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.

0

0

0

2069842

Monroe Power Plant

Facility 7

Facility name

This facility discharges to Lake Erie; discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.

0

0

0

2069842

Monroe Power Plant

Fresh surface water

This facility discharges to Lake Erie; discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.

0

0

0

2069842

Brackish surface water/Seawater

This facility discharges to Lake Erie; discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.

0

0

0

Groundwater

This facility discharges to Lake Erie; discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.

0

0

Third party destinations

This facility discharges to Lake Erie; discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.

0

Comment

This facility discharges to Lake Erie; discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.

Facility reference number

River Rouge discharges to the Detroit River; discharge is calculated by subtracting consumption from withdrawal volume. This facility also discharges a small amount of water to a Municipal Treatment Plant primarily from sanitary use.

24

0

0

161510

River Rouge Power Plant

Facility 8

Facility name

River Rouge discharges to the Detroit River; discharge is calculated by subtracting consumption from withdrawal volume. This facility also discharges a small amount of water to a Municipal Treatment Plant primarily from sanitary use.

24

0

0

161510

River Rouge Power Plant

Fresh surface water

River Rouge discharges to the Detroit River; discharge is calculated by subtracting consumption from withdrawal volume. This facility also discharges a small amount of water to a Municipal Treatment Plant primarily from sanitary use.

24

0

0

161510

Brackish surface water/Seawater

River Rouge discharges to the Detroit River; discharge is calculated by subtracting consumption from withdrawal volume. This facility also discharges a small amount of water to a Municipal Treatment Plant primarily from sanitary use.

24

0

0

Groundwater

River Rouge discharges to the Detroit River; discharge is calculated by subtracting consumption from withdrawal volume. This facility also discharges a small amount of water to a Municipal Treatment Plant primarily from sanitary use.
24
0

Third party destinations
River Rouge discharges to the Detroit River; discharge is calculated by subtracting consumption from withdrawal volume. This facility also discharges a small amount of water to a Municipal Treatment Plant primarily from sanitary use.
24

Comment
River Rouge discharges to the Detroit River; discharge is calculated by subtracting consumption from withdrawal volume. This facility also discharges a small amount of water to a Municipal Treatment Plant primarily from sanitary use.

Facility reference number
This facility discharges to the St. Clair River; volume is determined by subtracting estimated consumption from estimated withdrawal. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.
0
0
0
1001829
St. Clair Power Plant
Facility 9

Facility name
This facility discharges to the St. Clair River; volume is determined by subtracting estimated consumption from estimated withdrawal. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.
0
0
0
1001829
St. Clair Power Plant

Fresh surface water
This facility discharges to the St. Clair River; volume is determined by subtracting estimated consumption from estimated withdrawal. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.
0
0
0
1001829

Brackish surface water/Seawater
This facility discharges to the St. Clair River; volume is determined by subtracting estimated consumption from estimated withdrawal. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.
0
0
0

Groundwater
This facility discharges to the St. Clair River; volume is determined by subtracting estimated consumption from estimated withdrawal. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.
0
0

Third party destinations
This facility discharges to the St. Clair River; volume is determined by subtracting estimated consumption from estimated withdrawal. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.
0

Comment
This facility discharges to the St. Clair River; volume is determined by subtracting estimated consumption from estimated withdrawal. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.

Facility reference number
Sibley Quarry discharges to the Detroit River; discharge is calculated using discharge pumps capacity and run time. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.
0
0
0
2081
Sibley Quarry
Facility 10

Facility name
Sibley Quarry discharges to the Detroit River; discharge is calculated using discharge pumps capacity and run time. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.
0
0
0
2081
Sibley Quarry

Fresh surface water
Sibley Quarry discharges to the Detroit River; discharge is calculated using discharge pumps capacity and run time. This facility also discharges water to a Municipal

Treatment Plant primarily from sanitary use, but the volume has not been reported.
0
0
0
2081

Brackish surface water/Seawater

Sibley Quarry discharges to the Detroit River; discharge is calculated using discharge pumps capacity and run time. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.
0
0
0

Groundwater

Sibley Quarry discharges to the Detroit River; discharge is calculated using discharge pumps capacity and run time. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.
0
0

Third party destinations

Sibley Quarry discharges to the Detroit River; discharge is calculated using discharge pumps capacity and run time. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.
0

Comment

Sibley Quarry discharges to the Detroit River; discharge is calculated using discharge pumps capacity and run time. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.

Facility reference number

Taggart Compressor Station discharges water to the First Lake of the Six Lakes Chain; discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. This facility also discharges water to a septic tank primarily from sanitary use, but the volume has not been reported.
0
0
0
8488
Taggart Compressor Station
Facility 11

Facility name

Taggart Compressor Station discharges water to the First Lake of the Six Lakes Chain; discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. This facility also discharges water to a septic tank primarily from sanitary use, but the volume has not been reported.
0
0
0
8488
Taggart Compressor Station

Fresh surface water

Taggart Compressor Station discharges water to the First Lake of the Six Lakes Chain; discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. This facility also discharges water to a septic tank primarily from sanitary use, but the volume has not been reported.
0
0
0
8488

Brackish surface water/Seawater

Taggart Compressor Station discharges water to the First Lake of the Six Lakes Chain; discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. This facility also discharges water to a septic tank primarily from sanitary use, but the volume has not been reported.
0
0
0

Groundwater

Taggart Compressor Station discharges water to the First Lake of the Six Lakes Chain; discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. This facility also discharges water to a septic tank primarily from sanitary use, but the volume has not been reported.
0
0

Third party destinations

Taggart Compressor Station discharges water to the First Lake of the Six Lakes Chain; discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. This facility also discharges water to a septic tank primarily from sanitary use, but the volume has not been reported.
0

Comment

Taggart Compressor Station discharges water to the First Lake of the Six Lakes Chain; discharge is calculated by subtracting estimated total consumption from estimated total withdrawals. This facility also discharges water to a septic tank primarily from sanitary use, but the volume has not been reported.

Facility reference number

Trenton Channel Power Plant discharges water to the Detroit River; volumes are calculated by subtracting estimated consumption from estimated withdrawal. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.
0
0
0
218097

Trenton Channel Power Plant
Facility 12

Facility name
Trenton Channel Power Plant discharges water to the Detroit River; volumes are calculated by subtracting estimated consumption from estimated withdrawal. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.
0
0
0
218097
Trenton Channel Power Plant

Fresh surface water
Trenton Channel Power Plant discharges water to the Detroit River; volumes are calculated by subtracting estimated consumption from estimated withdrawal. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.
0
0
0
218097

Brackish surface water/Seawater
Trenton Channel Power Plant discharges water to the Detroit River; volumes are calculated by subtracting estimated consumption from estimated withdrawal. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.
0
0
0

Groundwater
Trenton Channel Power Plant discharges water to the Detroit River; volumes are calculated by subtracting estimated consumption from estimated withdrawal. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.
0
0

Third party destinations
Trenton Channel Power Plant discharges water to the Detroit River; volumes are calculated by subtracting estimated consumption from estimated withdrawal. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.
0

Comment
Trenton Channel Power Plant discharges water to the Detroit River; volumes are calculated by subtracting estimated consumption from estimated withdrawal. This facility also discharges water to a Municipal Treatment Plant primarily from sanitary use, but the volume has not been reported.

Facility reference number
The municipal water supplier does not provide a discrete amount of water discharged, therefore the amount of water discharged is estimated to be equivalent to the amount of water withdrawn.
144
0
0
0
DTE Headquarters
Facility 13

Facility name
The municipal water supplier does not provide a discrete amount of water discharged, therefore the amount of water discharged is estimated to be equivalent to the amount of water withdrawn.
144
0
0
0
DTE Headquarters

Fresh surface water
The municipal water supplier does not provide a discrete amount of water discharged, therefore the amount of water discharged is estimated to be equivalent to the amount of water withdrawn.
144
0
0
0

Brackish surface water/Seawater
The municipal water supplier does not provide a discrete amount of water discharged, therefore the amount of water discharged is estimated to be equivalent to the amount of water withdrawn.
144
0
0

Groundwater
The municipal water supplier does not provide a discrete amount of water discharged, therefore the amount of water discharged is estimated to be equivalent to the amount of water withdrawn.
144
0

Third party destinations
The municipal water supplier does not provide a discrete amount of water discharged, therefore the amount of water discharged is estimated to be equivalent to the amount of water withdrawn.

144

Comment

The municipal water supplier does not provide a discrete amount of water discharged, therefore the amount of water discharged is estimated to be equivalent to the amount of water withdrawn.

W5.1c

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

Facility reference number

CDP’s calculation method was used. Percentage was calculated in the following method: total water recycled and reused / (total water recycled + total water withdrawn).
About the same
76-99%
Fermi 2 Nuclear Power Plant
Facility 3

Facility name

CDP’s calculation method was used. Percentage was calculated in the following method: total water recycled and reused / (total water recycled + total water withdrawn).
About the same
76-99%
Fermi 2 Nuclear Power Plant

% recycled or reused

CDP’s calculation method was used. Percentage was calculated in the following method: total water recycled and reused / (total water recycled + total water withdrawn).
About the same
76-99%

Comparison with previous reporting year

CDP’s calculation method was used. Percentage was calculated in the following method: total water recycled and reused / (total water recycled + total water withdrawn).
About the same

Please explain

CDP’s calculation method was used. Percentage was calculated in the following method: total water recycled and reused / (total water recycled + total water withdrawn).

Facility reference number

CDP’s calculation method was used. Percentage was calculated in the following method: total water recycled and reused / (total water recycled + total water withdrawn).
About the same
76-99%
Greenwood Energy Center
Facility 4

Facility name

CDP’s calculation method was used. Percentage was calculated in the following method: total water recycled and reused / (total water recycled + total water withdrawn).
About the same
76-99%
Greenwood Energy Center

% recycled or reused

CDP’s calculation method was used. Percentage was calculated in the following method: total water recycled and reused / (total water recycled + total water withdrawn).
About the same
76-99%

Comparison with previous reporting year

CDP’s calculation method was used. Percentage was calculated in the following method: total water recycled and reused / (total water recycled + total water withdrawn).
About the same

Please explain

CDP’s calculation method was used. Percentage was calculated in the following method: total water recycled and reused / (total water recycled + total water withdrawn).

W5.1d

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

Water withdrawals – total volumes

% verified
Not verified

What standard and methodology was used?
None

Water withdrawals – volume by source

% verified
Not verified

What standard and methodology was used?
None

Water withdrawals – quality

% verified
Not verified

What standard and methodology was used?
Water withdrawals are reported to Michigan Environment, Great Lakes, and Energy Department (EGLE) annually through water use reports to comply with the state Water Use Program. The withdrawals are not verified by an external party but are subject to state inspection.

Water discharges – total volumes

% verified
Not verified

What standard and methodology was used?
Water withdrawals are reported to Michigan Environment, Great Lakes, and Energy Department (EGLE) annually through water use reports to comply with the state Water Use Program. The withdrawals are not verified by an external party but are subject to state inspection.

Water discharges – volume by destination

% verified
Not verified

What standard and methodology was used?
Water discharges are reported to Michigan Environment, Great Lakes, and Energy Department (EGLE) annually through water use reports to comply with the state Water Use and NPDES Permit programs. The discharges are not verified by an external party but are subject to state inspection.

Water discharges – volume by treatment method

% verified
Not verified

What standard and methodology was used?
Water discharges are reported to Michigan Environment, Great Lakes, and Energy Department (EGLE) annually through water use reports to comply with the state Water Use and NPDES Permit programs. The discharges are not verified by an external party but are subject to state inspection.

Water discharge quality – quality by standard effluent parameters

% verified
76-100

What standard and methodology was used?
The value of 76-100% verification represents analytical data provided by external laboratories used on a portion of the effluent parameters required by NPDES permits. The rest of the effluent parameters/data are measured by internal resources. All facilities participate in annual Discharge Monitoring Reports Quality Assurance (DMRQA) studies conducted by third parties.

Water discharge quality – temperature

% verified
Not verified

What standard and methodology was used?
Water discharges are reported to Michigan Environment, Great Lakes, and Energy Department (EGLE) annually through water use reports to comply with the state Water Use and NPDES Permit programs. The discharges are not verified by an external party but are subject to state inspection.

Water consumption – total volume

% verified
Not verified

What standard and methodology was used?
Water consumption values for cooling systems are reported to Michigan Environment, Great Lakes, and Energy Department (EGLE) and the Energy Information Administration (EIA) annually through water use reports. The water consumption values for cooling systems are not verified by an external party but are subject to state inspection.

Water recycled/reused

% verified
Not verified

What standard and methodology was used?
Water recycle/reuse is not verified by an external party, but it is reported to the Energy Information Administration (EIA) and it is subject to review.

W6. Governance

W6.1

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

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

W6.1a

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

	Scope	Content	Please explain
Row 1	Select facilities, businesses, or geographies only	Description of business dependency on water Description of business impact on water Company water targets and goals Commitments beyond regulatory compliance Commitment to stakeholder awareness and education Commitment to water stewardship and/or collective action Recognition of environmental linkages, for example, due to climate change	DTE Energy's Environmental Policy includes components that specifically address water issues. The Environmental Policy applies to our DTE Electric and DTE Gas business units that are certified to the ISO 14001 standard for environmental management systems. The Environmental Policy is available here: https://newlook.dteenergy.com/wps/wcm/connect/dte-web/home/community-and-news/common/environment/environmental-policies DTE's Environmental Policy includes the following statements that are specific to water: "We commit to, and hold our employees and officers accountable to….Strive to eliminate unnecessary use of water in our facilities and to improve the quality of our water discharges." A materiality assessment to identify key environmental, economic, and social issues that are important to both internal and external stakeholders was completed in early 2017 and included in DTE's 2016-2017 Corporate Citizenship Report at: https://empoweringmichigan.com/dte-impact/performance/. Water was not identified as a key issue for DTE as a result of the materiality assessment, which suggests that DTE's Environmental Policy sufficiently addresses water issues for the company. Extensive time and effort is being expended to comply with the revised rules related to water (e.g. revised Effluent Limitation Guideline (ELG) requirements to cease discharge of bottom ash transport water (BATW) and fly ash transport water and perform enhanced treatment of flue gas de-sulfurization (FGD) wastewater, and tighter operational performance standards for cooling water intake structures (CWIS) per 316(b) rules). For example, detailed decision documents have been created for several facilities that will continue to operate past the final compliance date for the revised ELG rule. These decision documents provide a strategy and pathway toward meeting the compliance deadline and beyond. The company has also incorporated water usage strategy as part of an internal sustainability initiative.

W6.2

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

Yes

W6.2a

(W6.2a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for water-related issues.

Position of individual	Please explain
Chief Executive Officer (CEO)	Our Chairman and CEO, together with other senior leaders of the company, exercise leadership in our sustainability initiatives. They are given water-related responsibilities so that water initiatives are brought in from the highest level for a company-wide approach. Through the Government Regulatory Committee, and Force for Growth Committee and other leadership committees, DTE Energy's senior management: • Executes the company's ESG strategy in consultation with the Board of Directors • Manages our environmental compliance processes • Mobilizes our employees, resources and partner organizations to strengthen and promote prosperity in our communities • Reports to Board of Directors on outcomes of ESG initiatives • Manages risks associated with environmental and sustainability opportunities • Receives compensation tied to achievement of company goals, including ESG targets

W6.2b

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

	Frequency that water-related issues are a scheduled agenda item	Governance mechanisms into which water-related issues are integrated	Please explain
Row 1	Scheduled - all meetings	Monitoring implementation and performance Overseeing acquisitions and divestiture Overseeing major capital expenditures 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 Reviewing and guiding corporate responsibility strategy Reviewing innovation/R&D priorities Setting performance objectives	The Public Policy and Responsibility Committee (PPRC) of the DTE Energy Board of Directors is responsible for reviewing and advising the Board on emerging social, economic, political, reputational and environmental issues that could significantly affect the Company's business and performance in relation to the community, shareholders, customers and employees. The PPRC's responsibilities and duties include direct responsibility for water-related issues that affect the Company. The PPRC's Charter is available on our website and includes the following statements on Membership & Authority: 1. The Committee shall be composed of three or more directors as determined by the Board of Directors. Committee members are appointed for one-year terms and can be re-appointed for additional terms. 2. The Committee has the authority to perform the duties listed in this Charter, as it determines to be necessary and advisable from time to time in its business judgment. 3. The Committee shall meet as necessary, but no fewer than three times a year. The Committee shall keep minutes or other records of its meetings. 4. The Committee has the authority to retain independent outside professional advisors or experts as it deems advisable or necessary, including the sole authority to retain and terminate any such advisors or experts, to carry out its duties. The Committee shall have sole authority to approve related fees and retention terms.

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)
The Vice President of Environmental Management & Resources manages a group that is responsible for managing compliance with environmental regulations, and assessing water-related risks and opportunities across the company. The Vice President reports directly to the COO.
Quarterly
Both assessing and managing water-related risks and opportunities
Other, please specify (Vice President, Environmental Management)

Responsibility
The Vice President of Environmental Management & Resources manages a group that is responsible for managing compliance with environmental regulations, and assessing water-related risks and opportunities across the company. The Vice President reports directly to the COO.
Quarterly
Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues
The Vice President of Environmental Management & Resources manages a group that is responsible for managing compliance with environmental regulations, and assessing water-related risks and opportunities across the company. The Vice President reports directly to the COO.
Quarterly

Please explain
The Vice President of Environmental Management & Resources manages a group that is responsible for managing compliance with environmental regulations, and assessing water-related risks and opportunities across the company. The Vice President reports directly to the COO.

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

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

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

(W-FB6.4a/W-CH6.4a/W-EU6.4a/W-OG6.4a/W-MM6.4a) What incentives are provided to C-suite employees or board members for the management of water-related issues (do not include the names of individuals)?

	Who is entitled to benefit from these incentives?	Indicator for incentivized performance	Please explain
Monetary reward	Corporate executive team	Other, please specify (DTE system of corporate priorities)	Our CEO received 67% of his 2018 total compensation in contingent, performance-based incentives that are focused on meeting our system of corporate priorities, including environmental goals. For our other named executive officers, the average percentage of contingent, performance-based compensation was 57%. Our short-term and long-term performance metrics all tie directly to our system of priorities. The rationale for this indicator is that these are the same metrics that management uses to assess the Company's progress toward our aspiration of becoming the best-operated energy company in North America and a force for growth and prosperity in the communities where we live and serve.
Recognition (non-monetary)	No one is entitled to these incentives	<Not Applicable>	Non-monetary incentives are not offered.
Other non-monetary reward	No one is entitled to these incentives	<Not Applicable>	Other non-monetary rewards are not offered.

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

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?

The ISO 14001 certified systems ensure that these facilities have processes in place to meet compliance with environmental regulations. Compliance with regulations helps to influence policy that is consistent with our overall strategy for the business, including protecting the environment. Water policy and strategy for the company is managed by the Vice President of Environmental Management & Resources.

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)

W7. Business strategy

W7.1

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

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	Yes, water-related issues are integrated	16-20	A vision or objective entitled "Water Usage" was incorporated into the company's developing environmental sustainability initiative in late 2016. Water withdrawal and water consumption are currently identified as the metrics (or KPIs) for these objectives. In addition, greater regulator engagement can be secured by coming into compliance with the new ELG rule gives the Company opportunity to engage with state regulators to craft a long-term strategy that benefits all parties. Note: This rule will be finalized in 2019. DTE holds ongoing cross-functional meetings to evaluate strategies and financial impact. Our long-term strategy incorporates the goal to maintain a reliable power generation system with affordable rates for customers. An example of this is DTE's initiative to close down three coal-fired power plants by 2023, and replace these with more efficient combined-cycle plants (e.g., Blue Water Energy Center). DTE uses the ISO 14001 certified Environmental Management System to comply with, as well as exceed, regulatory requirements. For example, DTE implements green infrastructure and low flow systems at Company Headquarters and all our Service Centers as a voluntary measure.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	16-20	Water resource considerations are factored into site expansions. As actions are underway to close several coal fired plants in the next 3 to 20 years, the Company is in the process of planning to construct new electric generation (e.g., Blue Water Energy Center). Several of the main considerations for this expansion are based on the availability of water and the condition of cooling water intake structures (CWIS) components at existing facilities. Also, tighter operational performance standards are put in place. One example is the company's work to comply with the revised 316(b) regulations of the Clean Water Act for cooling water intake structures (CWIS). The substantial effort to comply with the revised regulations is expected to result in tighter operational performance for CWIS at the applicable facilities. In addition, to increase reliability and affordability, DTE has expanded, and continues to expand, our renewable generation fleet specifically solar and wind generation.
Financial planning	Yes, water-related issues are integrated	16-20	There are increased investment opportunities related to implementing revised environmental regulations such as the 316(b) example provided above. Another investment opportunity is the effort to comply with the revised effluent limitation guideline (ELG) rule for NPDES permitted discharges. The Company is in the process of implementing strategies to comply with the new rule, and those strategies will require a substantial capital investment. Note: This rule will be finalized in 2019. Furthermore, DTE is driven by the economic benefit of renewables and continues to invest in renewable generation to improve the financial outlook of the Company. Aligning Company goals to shut down coal-fired power plants will reduce operating costs and provide a lucrative, long-term solution that is profitable for both the Company and the community. The Company mitigates financial risk by strategically selecting sites for future development to minimize impacts on natural resources, such as wetlands. DTE recognizes the fiscal advantages of adopting these solutions and considers financial impact in the Company long-term business strategy.

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)

152

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

-49

Water-related OPEX (+/- % change)

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

Please explain

DTE increased water-related CAPEX spending by 152% in 2018 due to 316(b) and ELG. The company anticipates a 49% decrease in CAPEX spending in 2019, also due to 316(b) and ELG. Significant increases in expenses are forecasted for 2020 and beyond. DTE does not explicitly differentiate OPEX spending for water-related issues from total OPEX spending.

W7.3

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

	Use of climate-related scenario analysis	Comment
Row 1	Yes	DTE has performed scenario analyses to support long-range planning for electric generation that was submitted to the Michigan Public Service Commission in the Company's Integrated Resource Plan (IRP) in March 2019. The scenario analyses for the IRP outline pathways that support DTE's emission reduction goal of reducing carbon emissions 80% from a 2005 baseline by 2040.

W7.3a

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

Yes

W7.3b

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

	Climate-related scenario(s)	Description of possible water-related outcomes	Company response to possible water-related outcomes
Row 1	Other, please specify (Scenarios to support DTE's March 2019 IRP submittal)	Possible water-related outcomes are reductions in water withdrawal rates and consumption that are aligned with the company's carbon reduction goals.	As the company transitions away from coal-fired generation to more renewable and natural gas generation, water used for cooling and other purposes will decline.

W7.4

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

Row 1

Does your company use an internal price on water?
No, and we do not anticipate doing so within the next two years

Please explain
DTE does not plan on using an internal price on water; however the Company’s water policy focuses on water reduction and reuse strategies in all projects.

W8. Targets

W8.1

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

	Levels for targets and/or goals	Monitoring at corporate level	Approach to setting and monitoring targets and/or goals
Row 1	Company-wide targets and goals Business level specific targets and/or goals Activity level specific targets and/or goals Site/facility specific targets and/or goals	Targets are monitored at the corporate level Goals are monitored at the corporate level	Relevant targets/goals are identified by determining long-term cost-saving initiatives, improving water and energy efficiency, and driving the initiative of environmental stewardship. Targets/goals are prioritized based on the level of impact the initiative will have on the company as whole, as well as by weighing the pros and cons of pursuing the initiative. DTE considers company reputation, long-term environmental impact, efficiency of systems, initial investment cost, and return on investment payback period. Business-level specific targets and goals include reducing the number of NPDES non-compliances. Company-wide targets and goals exist around water usage and water consumption as a part of a developing environmental sustainability initiative that began in 2016, and will continue to develop in the future.

W8.1a

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

Target reference number
Since 2005, DTE has reduced surface water withdrawals for power generation by 21% by retiring coal-fired power plants (e.g., Conners Creek and Harbor Beach Power Plants) that utilize water for cooling, which accomplishes 53% of our 2023 target. DTE projects that surface water withdrawals will continue to decrease in the future, as more water efficient systems are installed (e.g., Greenwood’s closed loop cooling water system) and coal-fired power plants are retired. These water goals are aligned with the company's goals to reduce carbon emissions from electric generating facilities 32 percent from a 2005 baseline by 2023, 50 percent by 2030 and 80 percent by 2040. These numbers represent current projections and are subject to change in the future.
53
2023
2017
2005
% reduction in total water withdrawals
Reduce water withdrawal by 40% in 2023, 60% in 2030, and 90% by 2040.
Corporate social responsibility
Business activity
Water withdrawals
Target 1

Category of target
Since 2005, DTE has reduced surface water withdrawals for power generation by 21% by retiring coal-fired power plants (e.g., Conners Creek and Harbor Beach Power Plants) that utilize water for cooling, which accomplishes 53% of our 2023 target. DTE projects that surface water withdrawals will continue to decrease in the future, as more water efficient systems are installed (e.g., Greenwood’s closed loop cooling water system) and coal-fired power plants are retired. These water goals are aligned with the company's goals to reduce carbon emissions from electric generating facilities 32 percent from a 2005 baseline by 2023, 50 percent by 2030 and 80 percent by 2040. These numbers represent current projections and are subject to change in the future.
53
2023
2017
2005
% reduction in total water withdrawals

Reduce water withdrawal by 40% in 2023, 60% in 2030, and 90% by 2040.
Corporate social responsibility
Business activity
Water withdrawals

Level

Since 2005, DTE has reduced surface water withdrawals for power generation by 21% by retiring coal-fired power plants (e.g., Conners Creek and Harbor Beach Power Plants) that utilize water for cooling, which accomplishes 53% of our 2023 target. DTE projects that surface water withdrawals will continue to decrease in the future, as more water efficient systems are installed (e.g., Greenwood's closed loop cooling water system) and coal-fired power plants are retired. These water goals are aligned with the company's goals to reduce carbon emissions from electric generating facilities 32 percent from a 2005 baseline by 2023, 50 percent by 2030 and 80 percent by 2040. These numbers represent current projections and are subject to change in the future.
53
2023
2017
2005
% reduction in total water withdrawals
Reduce water withdrawal by 40% in 2023, 60% in 2030, and 90% by 2040.
Corporate social responsibility
Business activity

Primary motivation

Since 2005, DTE has reduced surface water withdrawals for power generation by 21% by retiring coal-fired power plants (e.g., Conners Creek and Harbor Beach Power Plants) that utilize water for cooling, which accomplishes 53% of our 2023 target. DTE projects that surface water withdrawals will continue to decrease in the future, as more water efficient systems are installed (e.g., Greenwood's closed loop cooling water system) and coal-fired power plants are retired. These water goals are aligned with the company's goals to reduce carbon emissions from electric generating facilities 32 percent from a 2005 baseline by 2023, 50 percent by 2030 and 80 percent by 2040. These numbers represent current projections and are subject to change in the future.
53
2023
2017
2005
% reduction in total water withdrawals
Reduce water withdrawal by 40% in 2023, 60% in 2030, and 90% by 2040.
Corporate social responsibility

Description of target

Since 2005, DTE has reduced surface water withdrawals for power generation by 21% by retiring coal-fired power plants (e.g., Conners Creek and Harbor Beach Power Plants) that utilize water for cooling, which accomplishes 53% of our 2023 target. DTE projects that surface water withdrawals will continue to decrease in the future, as more water efficient systems are installed (e.g., Greenwood's closed loop cooling water system) and coal-fired power plants are retired. These water goals are aligned with the company's goals to reduce carbon emissions from electric generating facilities 32 percent from a 2005 baseline by 2023, 50 percent by 2030 and 80 percent by 2040. These numbers represent current projections and are subject to change in the future.
53
2023
2017
2005
% reduction in total water withdrawals
Reduce water withdrawal by 40% in 2023, 60% in 2030, and 90% by 2040.

Quantitative metric

Since 2005, DTE has reduced surface water withdrawals for power generation by 21% by retiring coal-fired power plants (e.g., Conners Creek and Harbor Beach Power Plants) that utilize water for cooling, which accomplishes 53% of our 2023 target. DTE projects that surface water withdrawals will continue to decrease in the future, as more water efficient systems are installed (e.g., Greenwood's closed loop cooling water system) and coal-fired power plants are retired. These water goals are aligned with the company's goals to reduce carbon emissions from electric generating facilities 32 percent from a 2005 baseline by 2023, 50 percent by 2030 and 80 percent by 2040. These numbers represent current projections and are subject to change in the future.
53
2023
2017
2005
% reduction in total water withdrawals

Baseline year

Since 2005, DTE has reduced surface water withdrawals for power generation by 21% by retiring coal-fired power plants (e.g., Conners Creek and Harbor Beach Power Plants) that utilize water for cooling, which accomplishes 53% of our 2023 target. DTE projects that surface water withdrawals will continue to decrease in the future, as more water efficient systems are installed (e.g., Greenwood's closed loop cooling water system) and coal-fired power plants are retired. These water goals are aligned with the company's goals to reduce carbon emissions from electric generating facilities 32 percent from a 2005 baseline by 2023, 50 percent by 2030 and 80 percent by 2040. These numbers represent current projections and are subject to change in the future.
53
2023
2017
2005

Start year

Since 2005, DTE has reduced surface water withdrawals for power generation by 21% by retiring coal-fired power plants (e.g., Conners Creek and Harbor Beach Power Plants) that utilize water for cooling, which accomplishes 53% of our 2023 target. DTE projects that surface water withdrawals will continue to decrease in the future, as more water efficient systems are installed (e.g., Greenwood's closed loop cooling water system) and coal-fired power plants are retired. These water goals are aligned with the company's goals to reduce carbon emissions from electric generating facilities 32 percent from a 2005 baseline by 2023, 50 percent by 2030 and 80 percent by 2040. These numbers represent current projections and are subject to change in the future.
53
2023
2017

Target year

Since 2005, DTE has reduced surface water withdrawals for power generation by 21% by retiring coal-fired power plants (e.g., Conners Creek and Harbor Beach Power Plants) that utilize water for cooling, which accomplishes 53% of our 2023 target. DTE projects that surface water withdrawals will continue to decrease in the future, as more water efficient systems are installed (e.g., Greenwood's closed loop cooling water system) and coal-fired power plants are retired. These water goals are aligned with

the company's goals to reduce carbon emissions from electric generating facilities 32 percent from a 2005 baseline by 2023, 50 percent by 2030 and 80 percent by 2040. These numbers represent current projections and are subject to change in the future.
53
2023

% achieved

Since 2005, DTE has reduced surface water withdrawals for power generation by 21% by retiring coal-fired power plants (e.g., Conners Creek and Harbor Beach Power Plants) that utilize water for cooling, which accomplishes 53% of our 2023 target. DTE projects that surface water withdrawals will continue to decrease in the future, as more water efficient systems are installed (e.g., Greenwood's closed loop cooling water system) and coal-fired power plants are retired. These water goals are aligned with the company's goals to reduce carbon emissions from electric generating facilities 32 percent from a 2005 baseline by 2023, 50 percent by 2030 and 80 percent by 2040. These numbers represent current projections and are subject to change in the future.
53

Please explain

Since 2005, DTE has reduced surface water withdrawals for power generation by 21% by retiring coal-fired power plants (e.g., Conners Creek and Harbor Beach Power Plants) that utilize water for cooling, which accomplishes 53% of our 2023 target. DTE projects that surface water withdrawals will continue to decrease in the future, as more water efficient systems are installed (e.g., Greenwood's closed loop cooling water system) and coal-fired power plants are retired. These water goals are aligned with the company's goals to reduce carbon emissions from electric generating facilities 32 percent from a 2005 baseline by 2023, 50 percent by 2030 and 80 percent by 2040. These numbers represent current projections and are subject to change in the future.

Target reference number

Since 2005, DTE has reduced surface water withdrawals for power generation by 21% by retiring coal-fired power plants (e.g., Conners Creek and Harbor Beach Power Plants) that utilize water for cooling. DTE projects that surface water withdrawals will continue to decrease in the future, as our generational mix transitions to renewables and natural gas, and coal-fired generation retires. This is the first year of measurement for water intensity, and % achieved is not measurable. These water goals are aligned with the company's goals to reduce carbon emissions from electric generating facilities 32 percent from a 2005 baseline by 2023, 50 percent by 2030 and 80 percent by 2040. These numbers represent current projections and are subject to change in the future.
0
2023
2017
2005
% reduction per unit of production
Reduce water intensity (million gallons per year withdrawn divided by giga-watt hours energy produced) by 25% by 2023, 35% by 2030, and 90% by 2040.
Water stewardship
Business activity
Product water intensity
Target 2

Category of target

Since 2005, DTE has reduced surface water withdrawals for power generation by 21% by retiring coal-fired power plants (e.g., Conners Creek and Harbor Beach Power Plants) that utilize water for cooling. DTE projects that surface water withdrawals will continue to decrease in the future, as our generational mix transitions to renewables and natural gas, and coal-fired generation retires. This is the first year of measurement for water intensity, and % achieved is not measurable. These water goals are aligned with the company's goals to reduce carbon emissions from electric generating facilities 32 percent from a 2005 baseline by 2023, 50 percent by 2030 and 80 percent by 2040. These numbers represent current projections and are subject to change in the future.
0
2023
2017
2005
% reduction per unit of production
Reduce water intensity (million gallons per year withdrawn divided by giga-watt hours energy produced) by 25% by 2023, 35% by 2030, and 90% by 2040.
Water stewardship
Business activity
Product water intensity

Level

Since 2005, DTE has reduced surface water withdrawals for power generation by 21% by retiring coal-fired power plants (e.g., Conners Creek and Harbor Beach Power Plants) that utilize water for cooling. DTE projects that surface water withdrawals will continue to decrease in the future, as our generational mix transitions to renewables and natural gas, and coal-fired generation retires. This is the first year of measurement for water intensity, and % achieved is not measurable. These water goals are aligned with the company's goals to reduce carbon emissions from electric generating facilities 32 percent from a 2005 baseline by 2023, 50 percent by 2030 and 80 percent by 2040. These numbers represent current projections and are subject to change in the future.
0
2023
2017
2005
% reduction per unit of production
Reduce water intensity (million gallons per year withdrawn divided by giga-watt hours energy produced) by 25% by 2023, 35% by 2030, and 90% by 2040.
Water stewardship
Business activity

Primary motivation

Since 2005, DTE has reduced surface water withdrawals for power generation by 21% by retiring coal-fired power plants (e.g., Conners Creek and Harbor Beach Power Plants) that utilize water for cooling. DTE projects that surface water withdrawals will continue to decrease in the future, as our generational mix transitions to renewables and natural gas, and coal-fired generation retires. This is the first year of measurement for water intensity, and % achieved is not measurable. These water goals are aligned with the company's goals to reduce carbon emissions from electric generating facilities 32 percent from a 2005 baseline by 2023, 50 percent by 2030 and 80 percent by 2040. These numbers represent current projections and are subject to change in the future.
0
2023
2017
2005
% reduction per unit of production
Reduce water intensity (million gallons per year withdrawn divided by giga-watt hours energy produced) by 25% by 2023, 35% by 2030, and 90% by 2040.
Water stewardship

Description of target

Since 2005, DTE has reduced surface water withdrawals for power generation by 21% by retiring coal-fired power plants (e.g., Conners Creek and Harbor Beach Power Plants) that utilize water for cooling. DTE projects that surface water withdrawals will continue to decrease in the future, as our generational mix transitions to renewables and natural gas, and coal-fired generation retires. This is the first year of measurement for water intensity, and % achieved is not measurable. These water goals are aligned with the company's goals to reduce carbon emissions from electric generating facilities 32 percent from a 2005 baseline by 2023, 50 percent by 2030 and 80 percent by 2040. These numbers represent current projections and are subject to change in the future.
0
2023
2017
2005
% reduction per unit of production
Reduce water intensity (million gallons per year withdrawn divided by giga-watt hours energy produced) by 25% by 2023, 35% by 2030, and 90% by 2040.

Quantitative metric
Since 2005, DTE has reduced surface water withdrawals for power generation by 21% by retiring coal-fired power plants (e.g., Conners Creek and Harbor Beach Power Plants) that utilize water for cooling. DTE projects that surface water withdrawals will continue to decrease in the future, as our generational mix transitions to renewables and natural gas, and coal-fired generation retires. This is the first year of measurement for water intensity, and % achieved is not measurable. These water goals are aligned with the company's goals to reduce carbon emissions from electric generating facilities 32 percent from a 2005 baseline by 2023, 50 percent by 2030 and 80 percent by 2040. These numbers represent current projections and are subject to change in the future.
0
2023
2017
2005
% reduction per unit of production

Baseline year
Since 2005, DTE has reduced surface water withdrawals for power generation by 21% by retiring coal-fired power plants (e.g., Conners Creek and Harbor Beach Power Plants) that utilize water for cooling. DTE projects that surface water withdrawals will continue to decrease in the future, as our generational mix transitions to renewables and natural gas, and coal-fired generation retires. This is the first year of measurement for water intensity, and % achieved is not measurable. These water goals are aligned with the company's goals to reduce carbon emissions from electric generating facilities 32 percent from a 2005 baseline by 2023, 50 percent by 2030 and 80 percent by 2040. These numbers represent current projections and are subject to change in the future.
0
2023
2017
2005

Start year
Since 2005, DTE has reduced surface water withdrawals for power generation by 21% by retiring coal-fired power plants (e.g., Conners Creek and Harbor Beach Power Plants) that utilize water for cooling. DTE projects that surface water withdrawals will continue to decrease in the future, as our generational mix transitions to renewables and natural gas, and coal-fired generation retires. This is the first year of measurement for water intensity, and % achieved is not measurable. These water goals are aligned with the company's goals to reduce carbon emissions from electric generating facilities 32 percent from a 2005 baseline by 2023, 50 percent by 2030 and 80 percent by 2040. These numbers represent current projections and are subject to change in the future.
0
2023
2017

Target year
Since 2005, DTE has reduced surface water withdrawals for power generation by 21% by retiring coal-fired power plants (e.g., Conners Creek and Harbor Beach Power Plants) that utilize water for cooling. DTE projects that surface water withdrawals will continue to decrease in the future, as our generational mix transitions to renewables and natural gas, and coal-fired generation retires. This is the first year of measurement for water intensity, and % achieved is not measurable. These water goals are aligned with the company's goals to reduce carbon emissions from electric generating facilities 32 percent from a 2005 baseline by 2023, 50 percent by 2030 and 80 percent by 2040. These numbers represent current projections and are subject to change in the future.
0
2023

% achieved
Since 2005, DTE has reduced surface water withdrawals for power generation by 21% by retiring coal-fired power plants (e.g., Conners Creek and Harbor Beach Power Plants) that utilize water for cooling. DTE projects that surface water withdrawals will continue to decrease in the future, as our generational mix transitions to renewables and natural gas, and coal-fired generation retires. This is the first year of measurement for water intensity, and % achieved is not measurable. These water goals are aligned with the company's goals to reduce carbon emissions from electric generating facilities 32 percent from a 2005 baseline by 2023, 50 percent by 2030 and 80 percent by 2040. These numbers represent current projections and are subject to change in the future.
0

Please explain
Since 2005, DTE has reduced surface water withdrawals for power generation by 21% by retiring coal-fired power plants (e.g., Conners Creek and Harbor Beach Power Plants) that utilize water for cooling. DTE projects that surface water withdrawals will continue to decrease in the future, as our generational mix transitions to renewables and natural gas, and coal-fired generation retires. This is the first year of measurement for water intensity, and % achieved is not measurable. These water goals are aligned with the company's goals to reduce carbon emissions from electric generating facilities 32 percent from a 2005 baseline by 2023, 50 percent by 2030 and 80 percent by 2040. These numbers represent current projections and are subject to change in the future.

Target reference number
In 2018, DTE achieved 23% reduction from 2016 levels, which accomplishes 66% of our target.
66
2022
2017
2016
% reduction in total water consumption
DTE's target is to to reduce water use by 35% by 2022 at DTE Gas and Electric facilities, excluding plant operations. As part of an internal initiative, DTE aims to develop and implement a plan to reduce water consumption/impact, with primary focus on Company Headquarters. Other areas of focus will be Service Centers and the Fermi Power Plant (outside of power block).
Water stewardship
Site/facility
Water consumption
Target 3

Category of target
In 2018, DTE achieved 23% reduction from 2016 levels, which accomplishes 66% of our target.
66
2022
2017
2016
% reduction in total water consumption
DTE's target is to to reduce water use by 35% by 2022 at DTE Gas and Electric facilities, excluding plant operations. As part of an internal initiative, DTE aims to develop and implement a plan to reduce water consumption/impact, with primary focus on Company Headquarters. Other areas of focus will be Service Centers and the Fermi Power Plant (outside of power block).
Water stewardship
Site/facility
Water consumption

Level
In 2018, DTE achieved 23% reduction from 2016 levels, which accomplishes 66% of our target.
66
2022
2017
2016
% reduction in total water consumption
DTE's target is to to reduce water use by 35% by 2022 at DTE Gas and Electric facilities, excluding plant operations. As part of an internal initiative, DTE aims to develop and implement a plan to reduce water consumption/impact, with primary focus on Company Headquarters. Other areas of focus will be Service Centers and the Fermi Power Plant (outside of power block).
Water stewardship
Site/facility

Primary motivation
In 2018, DTE achieved 23% reduction from 2016 levels, which accomplishes 66% of our target.
66
2022
2017
2016
% reduction in total water consumption
DTE's target is to to reduce water use by 35% by 2022 at DTE Gas and Electric facilities, excluding plant operations. As part of an internal initiative, DTE aims to develop and implement a plan to reduce water consumption/impact, with primary focus on Company Headquarters. Other areas of focus will be Service Centers and the Fermi Power Plant (outside of power block).
Water stewardship

Description of target
In 2018, DTE achieved 23% reduction from 2016 levels, which accomplishes 66% of our target.
66
2022
2017
2016
% reduction in total water consumption
DTE's target is to to reduce water use by 35% by 2022 at DTE Gas and Electric facilities, excluding plant operations. As part of an internal initiative, DTE aims to develop and implement a plan to reduce water consumption/impact, with primary focus on Company Headquarters. Other areas of focus will be Service Centers and the Fermi Power Plant (outside of power block).

Quantitative metric
In 2018, DTE achieved 23% reduction from 2016 levels, which accomplishes 66% of our target.
66
2022
2017
2016
% reduction in total water consumption

Baseline year
In 2018, DTE achieved 23% reduction from 2016 levels, which accomplishes 66% of our target.
66
2022
2017
2016

Start year
In 2018, DTE achieved 23% reduction from 2016 levels, which accomplishes 66% of our target.
66
2022
2017

Target year
In 2018, DTE achieved 23% reduction from 2016 levels, which accomplishes 66% of our target.
66
2022

% achieved
In 2018, DTE achieved 23% reduction from 2016 levels, which accomplishes 66% of our target.
66

Please explain
In 2018, DTE achieved 23% reduction from 2016 levels, which accomplishes 66% of our target.

W8.1b

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

Goal
Progress is assessed through the amount of water being reused/recycled, in addition to other measures.
2023
2017
2016
DTE aims to improve water stewardship practices at power generating facilities, company offices, and other business units across the company. This will help achieve water security by instilling a culture of water reduction policies where possible. This goal is important to the company because water reduction initiatives are environmentally responsible and cost-saving. The company is implementing this goal company-wide by going through an environmental review process captured in the environmental change checklist for each new project, including water use and management of wastewater. Whenever possible, water reduction is accomplished through reuse/recycle options and process change. Additionally, the use of water intensive systems is monitored to decrease run time when use is not necessary.
Corporate social responsibility
Company-wide
Other, please specify (Improve water stewardship culture)

Level
Progress is assessed through the amount of water being reused/recycled, in addition to other measures.
2023
2017
2016
DTE aims to improve water stewardship practices at power generating facilities, company offices, and other business units across the company. This will help achieve water security by instilling a culture of water reduction policies where possible. This goal is important to the company because water reduction initiatives are environmentally responsible and cost-saving. The company is implementing this goal company-wide by going through an environmental review process captured in the environmental change checklist for each new project, including water use and management of wastewater. Whenever possible, water reduction is accomplished through reuse/recycle options and process change. Additionally, the use of water intensive systems is monitored to decrease run time when use is not necessary.
Corporate social responsibility
Company-wide

Motivation
Progress is assessed through the amount of water being reused/recycled, in addition to other measures.
2023
2017
2016
DTE aims to improve water stewardship practices at power generating facilities, company offices, and other business units across the company. This will help achieve water security by instilling a culture of water reduction policies where possible. This goal is important to the company because water reduction initiatives are environmentally responsible and cost-saving. The company is implementing this goal company-wide by going through an environmental review process captured in the environmental change checklist for each new project, including water use and management of wastewater. Whenever possible, water reduction is accomplished through reuse/recycle options and process change. Additionally, the use of water intensive systems is monitored to decrease run time when use is not necessary.
Corporate social responsibility

Description of goal
Progress is assessed through the amount of water being reused/recycled, in addition to other measures.
2023
2017
2016
DTE aims to improve water stewardship practices at power generating facilities, company offices, and other business units across the company. This will help achieve water security by instilling a culture of water reduction policies where possible. This goal is important to the company because water reduction initiatives are environmentally responsible and cost-saving. The company is implementing this goal company-wide by going through an environmental review process captured in the environmental change checklist for each new project, including water use and management of wastewater. Whenever possible, water reduction is accomplished through reuse/recycle options and process change. Additionally, the use of water intensive systems is monitored to decrease run time when use is not necessary.

Baseline year
Progress is assessed through the amount of water being reused/recycled, in addition to other measures.
2023
2017
2016

Start year
Progress is assessed through the amount of water being reused/recycled, in addition to other measures.
2023
2017

End year
Progress is assessed through the amount of water being reused/recycled, in addition to other measures.
2023

Progress
Progress is assessed through the amount of water being reused/recycled, in addition to other measures.

W9. Linkages and trade-offs

W9.1

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

Yes

W9.1a

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

Linkage or tradeoff

In response to the global initiative of reducing greenhouse gas emissions, the Company is retiring coal-fired power plants. DTE Energy is in the process of retiring the Trenton, River Rouge, and St. Clair power plants by 2023 to reduce carbon emissions and water consumption. DTE retired the Conners Creek power plant in 2008, and Harbor Beach power plant in 2013. The retiring of these plants will reduce carbon emissions 32% by 2023, 50% by 2030 and 80% by 2040. The addition of wind and solar energy to our power generation fleet ensures that DTE continues to reliably distribute energy to its customers while reducing carbon emissions and increasing water efficiency.

Using less carbon intensive fuels and closing coal-fired power plants will reduce GHG emissions and reduce water consumption by eliminating the need for cooling water. This has a high impact on the company and the environment.

Decreased GHG emissions

Linkage

Type of linkage/tradeoff

In response to the global initiative of reducing greenhouse gas emissions, the Company is retiring coal-fired power plants. DTE Energy is in the process of retiring the Trenton, River Rouge, and St. Clair power plants by 2023 to reduce carbon emissions and water consumption. DTE retired the Conners Creek power plant in 2008, and Harbor Beach power plant in 2013. The retiring of these plants will reduce carbon emissions 32% by 2023, 50% by 2030 and 80% by 2040. The addition of wind and solar energy to our power generation fleet ensures that DTE continues to reliably distribute energy to its customers while reducing carbon emissions and increasing water efficiency.

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Using less carbon intensive fuels and closing coal-fired power plants will reduce GHG emissions and reduce water consumption by eliminating the need for cooling water. This has a high impact on the company and the environment.

Policy or action

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Linkage or tradeoff

Retiring of DTE coal-fired power plants reduces the need for cooling water intake structures, therefore mitigating fish and aquatic organism mortality. The Company continues to evaluate appropriate and alternative designs to minimize environmental impact for cooling water intake structures that remain in operation.

Reducing the use of cooling water intake structures decreases the potential of the impingement and entrainment of fish and other aquatic organisms, increasing ecosystem resilience. This has a low impact on the company and the environment, as DTE designs to minimize environmental impact for cooling water intake structures that remain in operation.

Increased biodiversity

Linkage

Type of linkage/tradeoff

Retiring of DTE coal-fired power plants reduces the need for cooling water intake structures, therefore mitigating fish and aquatic organism mortality. The Company continues to evaluate appropriate and alternative designs to minimize environmental impact for cooling water intake structures that remain in operation.

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Policy or action

Retiring of DTE coal-fired power plants reduces the need for cooling water intake structures, therefore mitigating fish and aquatic organism mortality. The Company continues to evaluate appropriate and alternative designs to minimize environmental impact for cooling water intake structures that remain in operation.

Linkage or tradeoff

DTE develops wind parks for energy generation; turbines and service roads only require 3-5% of total land in the wind park. Additionally, wind turbines disrupt surrounding wildlife and habitat by causing noise pollution and habitat intrusion, specifically for birds and bats. The rest of the land is still usable for other purposes, such as farming or grazing.

Renewable energy equipment, such as wind turbines and solar panels, requires considerable use of land, especially compared to traditional electric steam generating power plants. This has medium impact on the company and the environment; DTE aims to reduce habitat disruption and use land for other purposes as well.

Other, please specify (Conversion of farm land)

Tradeoff

Type of linkage/tradeoff
DTE develops wind parks for energy generation; turbines and service roads only require 3-5% of total land in the wind park. Additionally, wind turbines disrupt surrounding wildlife and habitat by causing noise pollution and habitat intrusion, specifically for birds and bats. The rest of the land is still usable for other purposes, such as farming or grazing.
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Linkage or tradeoff
The DTE Greenwood facility uses a closed-cycle cooling system. As DTE considers implementing closed-cycle cooling in other facilities in the future, the Company plans to weigh the pros and cons at each site. Additionally, DTE has plans to develop new power generating stations that are more efficient, such as the Blue Water Energy Center. The combined cycle system will use less energy than traditional systems, allowing for reduced water use, as well as more efficient energy production.
Although more water efficient, closed-cycle cooling systems use circulating pumps and fans, which require additional energy to operate. This can potentially reduce net generation output. This has medium impact on the company and the environment; DTE plans to weigh the pros and cons at each site and implement closed-cycle cooling systems where it is energy efficient.
Decreased energy efficiency
Tradeoff

Type of linkage/tradeoff
The DTE Greenwood facility uses a closed-cycle cooling system. As DTE considers implementing closed-cycle cooling in other facilities in the future, the Company plans to weigh the pros and cons at each site. Additionally, DTE has plans to develop new power generating stations that are more efficient, such as the Blue Water Energy Center. The combined cycle system will use less energy than traditional systems, allowing for reduced water use, as well as more efficient energy production.
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Description of linkage/tradeoff
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Policy or action
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Linkage or tradeoff
The Company develops solar parks for large-scale power generation on brownfield sites, but also owns and operates smaller-scale solar arrays located on land owned by customers, including corporations, businesses, and municipalities. Continuing to do so minimizes the need for encroachment of valuable, undeveloped public lands.
As DTE continues to increase renewable electric generation, the company will make a conscious effort to focus on developing solar fields on otherwise unusable land, such as impacted brownfields or developed urban environments. This has a high impact on the company and the environment because it minimizes the need for encroachment of valuable, undeveloped public lands.
Other, please specify (Brownfield redevelopment; renewables)
Linkage

Type of linkage/tradeoff
The Company develops solar parks for large-scale power generation on brownfield sites, but also owns and operates smaller-scale solar arrays located on land owned by customers, including corporations, businesses, and municipalities. Continuing to do so minimizes the need for encroachment of valuable, undeveloped public lands.
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Other, please specify (Brownfield redevelopment; renewables)

Description of linkage/tradeoff
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As DTE continues to increase renewable electric generation, the company will make a conscious effort to focus on developing solar fields on otherwise unusable land, such as impacted brownfields or developed urban environments. This has a high impact on the company and the environment because it minimizes the need for encroachment of valuable, undeveloped public lands.

Policy or action
The Company develops solar parks for large-scale power generation on brownfield sites, but also owns and operates smaller-scale solar arrays located on land owned by customers, including corporations, businesses, and municipalities. Continuing to do so minimizes the need for encroachment of valuable, undeveloped public lands.

W10. Verification

W10.1

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

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

W11. Sign off

W-FI

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

N/A

W11.1

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

	Job title	Corresponding job category
Row 1	Vice President, Environmental Management and Resources	Other, please specify (Vice President - Environment/Sustainability)

W11.2

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

No

SW. Supply chain module

SW0.1

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

	Annual revenue
Row 1	1420000000

SW0.2

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

Yes

SW0.2a

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

	ISIN country code	ISIN numeric identifier (including single check digit)
Row 1	US	2333311072

SW1.1

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

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 site facilities?

No, not currently but we intend to provide it within the next two years

SW2.1

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

SW2.2

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

No

SW3.1

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

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

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

Please confirm below

I have read and accept the applicable Terms