

**Module: Introduction****Page: W0. Introduction****W0.1****Introduction**

**Please give a general description and introduction to your organization.**

DTE Energy (NYSE: DTE) is a diversified U.S. energy company with approximately \$10.4 billion in revenues for 2015. Our largest operating subsidiaries are DTE Electric, an electric utility, and DTE Gas, 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 Commissions (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 southeastern 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 1.2 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) unconventional gas and oil project development and production; 3) power and industrial projects and coal transportation and marketing; and 4) energy marketing and trading operations. More information on DTE Energy, including our Corporate Citizen Report, can be found at: <https://www.newlook.dteenergy.com/wps/wcm/connect/dte-web/dte-pages/ccr/home/home>

**W0.2****Reporting year**

**Please state the start and end date of the year for which you are reporting data.**

**Period for which data is reported**

Thu 01 Jan 2015 - Thu 31 Dec 2015

---

**W0.3****Reporting boundary**

**Please indicate the category that describes the reporting boundary for companies, entities, or groups for which water-related impacts are reported.**

Companies, entities or groups over which financial control is exercised

---

**W0.4****Exclusions**

**Are there any geographies, facilities or types of water inputs/outputs within this boundary which are not included in your disclosure?**

Yes

---

**W0.4a****Exclusions**

**Please report the exclusions in the following table**

Exclusion	Please explain why you have made the exclusion
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. 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. The water use at these types of facilities is significantly less than that of the steam electric power generating stations.
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. 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

Exclusion	Please explain why you have made the exclusion
	power generating stations. The one exception to this exclusion is in regards to our Taggart Compressor Station. This facility holds a NPDES Permit and therefore is included in the disclosure.
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. 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.
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. 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.
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.

#### Further Information

#### Module: Current State

#### Page: W1. Context

#### W1.1

Please rate the importance (current and future) of water quality and water quantity to the success of your organization

Water quality and quantity	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater	Vital for operations	Important	Direct: Sufficient amounts of good quality freshwater are absolutely vital for non-contact cooling at our steam electric generating plants. We could not supply electricity, an essential product for

Water quality and quantity	Direct use importance rating	Indirect use importance rating	Please explain
available for use			customers, without this resource. 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 of our operations.
Sufficient amounts of recycled, brackish and/or produced water available for use	Vital for operations	Have not evaluated	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 18% of DTE Electric's generating capability. 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.

#### W1.2

**For your total operations, please detail which of the following water aspects are regularly measured and monitored and provide an explanation as to why or why not**

Water aspect	% of sites/facilities/operations	Please explain
Water withdrawals- total volumes	76-100	The vast majority of withdrawals are in the form of noncontact cooling water for our electric generating facilities. These fresh water withdrawals are measured and monitored for the purpose of 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 withdrawals- volume by sources	76-100	The vast majority of withdrawals are in the form of noncontact cooling water for our electric generating facilities. These fresh water withdrawals are measured and monitored for the purpose of 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.
Water discharges- total	76-100	The vast majority of discharges are in the form of noncontact cooling water from our electric generating

Water aspect	% of sites/facilities/operations	Please explain
volumes		facilities. These discharges are measured and monitored for the purpose of 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- volume by destination	76-100	The vast majority of 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 the purpose of 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 discharges are to ground water and municipal water treatment plants; these discharges may not be measured, and account for <1% of the total.
Water discharges- volume by treatment method	76-100	On Site Treatment: The vast majority of discharges are associated with our electric generating facilities, and are treated on site with various methods (e.g. chemical clarification, plain clarification, oil/water separation). These discharges are returned to surface waters, and are measured and monitored for the purpose of monthly NPDES reporting, as well as annual water use reporting for the state of Michigan. These reports are required by federal and state regulations. Off Site Treatment: The remaining discharges are largely associated with the potable water needs of our facilities, and are treated off site via 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 off site facility.
Water discharge quality data- quality by standard effluent parameters	76-100	On Site Treatment: Water quality standards for the vast majority of discharges are provided in the NPDES permits associated with our electric generating facilities. The NPDES program is administered by the State of Michigan where the majority of 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 consumption- total volume	76-100	The vast majority of consumption 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. The balance of consumption is associated with other operations such as potable water needs, groundwater withdrawal/discharges, and dust control.
Facilities providing fully-functioning WASH services for all workers	76-100	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 widely measured and monitored for billing purposes, which are mainly provided by local municipalities.

W1.2a

**Water withdrawals: for the reporting year, please provide total water withdrawal data by source, across your operations**

Source	Quantity (megaliters/year)	How does total water withdrawals for this source compare to the last reporting year?	Comment
Fresh surface water	4654775	About the same	The amount of withdrawal in 2015 was approximately 1% lower than in 2014, which is essentially about the same when comparing the two years.
Brackish surface water/seawater	0	Not applicable	Brackish surface water/seawater is not withdrawn as part of our operations.
Rainwater	0	Not applicable	Rainwater as a source of withdrawal is not accounted for as part of our operations.
Groundwater - renewable	1991	About the same	One facility (Sibley Quarry) withdraws groundwater that is formally accounted for and reported. Groundwater removed for other purposes (e.g. dewatering for pipeline projects) is typically not measured or reported.
Groundwater - non-renewable	0	Not applicable	Groundwater – non-renewable as a source of withdrawal is not accounted for as part of our operations.
Produced/process water	0		Produced/process as a source of withdrawal is not accounted for as part of our operations.
Municipal supply	2	About the same	The reported volume pertains to one facility that withdraws municipal supply for cooling water purposes; this source is measured and accounted for. Municipal supply withdrawals at other company facilities are primarily for potable water needs; these sources are typically measured or estimated for billing purposes, but have not been accounted for reporting purposes.
Wastewater from another organization	0		Wastewater from another organization as a source of withdrawal is not accounted for as part of our operations.
Total	4656768		The vast majority of the total withdrawal is fresh surface water. As stated above, the amount of withdrawal in 2015 was about the same when compared with 2014.

**W1.2b**

**Water discharges: for the reporting year, please provide total water discharge data by destination, across your operations**

Destination	Quantity (megaliters/year)	How does total water discharged to this destination compare to the last reporting year?	Comment
Fresh surface water	4581441	About the same	The amount of discharge in 2015 was approximately 1% lower than in 2014, which is essentially about the same when comparing the two years.
Brackish surface water/seawater	0	Not applicable	Discharge to brackish surface water/seawater is not part of our operations.
Groundwater	0	Not applicable	Discharge to groundwater is not accounted for as part of our operations.
Municipal/industrial wastewater treatment plant	27	About the same	The reported volume pertains to three facilities that discharge process wastewater to a municipal treatment plant as part of power plant operations; this discharge is measured and accounted for. Discharges to municipal treatment plants at other company facilities are primarily for potable water needs; these sources are typically measured or estimated for billing purposes, but have not been accounted for reporting purposes.
Wastewater for another organization	0	Not applicable	Discharge for another organization is not part of our operations.
Total	4581468	About the same	The vast majority of the total discharges is to is fresh surface water. As stated above, the amount of discharge in 2015 was about the same when compared with 2014.

**W1.2c**

**Water consumption: for the reporting year, please provide total water consumption data, across your operations**

Consumption (megaliters/year)	How does this consumption figure compare to the last reporting year?	Comment
75732	About the same	The amount of consumption in 2015 was nearly the same when

Consumption (megaliters/year)	How does this consumption figure compare to the last reporting year?	Comment
		compared with 2014.

**W1.3**

**Do you request your suppliers to report on their water use, risks and/or management?**

No

**W1.3a**

Please provide the proportion of suppliers you request to report on their water use, risks and/or management and the proportion of your procurement spend this represents

Proportion of suppliers %	Total procurement spend %	Rationale for this coverage

**W1.3b**

**Please choose the option that best explains why you do not request your suppliers to report on their water use, risks and/or management**



Primary reason	Please explain
Judged to be unimportant	Water use by our suppliers is not considered a key component at this time when evaluating their goods and services. In addition, there has been no instruction from management to consider water use when evaluating suppliers.

#### W1.4

Has your organization experienced any detrimental impacts related to water in the reporting year?

Yes

#### W1.4a

Please describe the detrimental impacts experienced by your organization related to water in the reporting year

Country	River basin	Impact indicator	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
United States of America	St. Lawrence	Reg-Mandatory water efficiency, conservation, recycling or process standards Reg-Regulation of discharge quality/volumes leading to higher compliance costs	Closure of operations	Revised Effluent Limitation Guidelines (ELGs) for steam electric plants were finalized on 9/30/2015. New limits will impose a significant financial burden to the company, and will likely cause several plants to close. One of the most significant changes is the requirement to cease discharge of bottom ash transport water (BATW). Closing plants will	Compliance with ELG requirements begins as early as 11/1/2018, but no later than 12/31/2023. However, the costs for compliance begin this year and will	Unknown	Engagement with community Engagement with customers Engagement with public policy makers Engagement with suppliers	The Company implemented a capital project to improve the infrastructure in a manner to reduce the risk of flooding at one of our electric generating stations during heavy rainfall

Country	River basin	Impact indicator	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
				require the company to build or purchase replacement power. The revised ELGs will also 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.	continue after 2023.		Infrastructure investment Increased capital expenditure Increased investment in new technology Promote best practice and awareness Strengthen links with local community	events.

**W1.4b**

Please choose the option below that best explains why you do not know if your organization experienced any detrimental impacts related to water in the reporting year and any plans you have to investigate this in the future

Primary reason	Future plans
----------------	--------------

**Further Information**

## Module: Risk Assessment

### Page: W2. Procedures and Requirements

#### W2.1

Does your organization undertake a water-related risk assessment?

Water risks are assessed

#### W2.2

Please select the options that best describe your procedures with regard to assessing water risks

Risk assessment procedure	Coverage	Scale	Please explain
Water risk assessment undertaken independently of other risk assessments	Direct operations	Some facilities	Water risks are currently evaluated on a case-by-case basis at individual facilities. For example, there is a risk of a reduced supply of non-contact cooling water at one of our electric generating stations due to excessive sedimentation in the intake bay. This type of risk is particular to this plant, and is based on local factors rather than a broad condition of the fresh water supply. Note: This risk at the facility did not materialize during this reporting period.

#### W2.3

Please state how frequently you undertake water risk assessments, what geographical scale and how far into the future you consider risks for each assessment

Frequency	Geographic scale	How far into the future are risks considered?	Comment
Sporadically not defined	Facility	1 to 3 years	Water risks are currently evaluated on a case-by-case basis at individual facilities. For example, there is a risk of a reduced supply of non-contact cooling water at one of our electric generating stations due to excessive sedimentation in the intake bay. This type of risk is particular to this plant, and is based on local factors rather than a broad condition of the fresh water supply. Note: This risk at the facility did not materialize during this reporting period.

#### W2.4

**Have you evaluated how water risks could affect the success (viability, constraints) of your organization's growth strategy?**

Yes, evaluated over the next 1 year

#### W2.4a

**Please explain how your organization evaluated the effects of water risks on the success (viability, constraints) of your organization's growth strategy?**

The effects of water risks are evaluated on a case-by-case basis pertaining to our organization's growth strategy. For example, the Company modified the cooling pond for one of our electric generating stations in an effort to balance electrical derates due to insufficient condenser cooling capability. The potential sources of water to fill the modification were evaluated for a variety of risk factors (e.g. cost, availability, reputational impact). The chosen source of water turned out to be successful in terms of mitigating the risk factors.

#### W2.4b

**What is the main reason for not having evaluated how water risks could affect the success (viability, constraints) of your organization's growth strategy, and are there any plans in place to do so in the future?**

Main reason	Current plans	Timeframe until evaluation	Comment
-------------	---------------	----------------------------	---------

**W2.5**

**Please state the methods used to assess water risks**

Method	Please explain how these methods are used in your risk assessment
Internal company knowledge Regional government databases	Internal company knowledge is used on a case-by-case basis, and regional government databases are available as needed.

**W2.6**

**Which of the following contextual issues are always factored into your organization's water risk assessments?**

Issues	Choose option	Please explain
Current water availability and quality parameters at a local level	Relevant, included	These issues are relevant and included as situations arise.
Current water regulatory frameworks and tariffs at a local level	Relevant, included	These issues are relevant and included as situations

Issues	Choose option	Please explain
		arise.
Current stakeholder conflicts concerning water resources at a local level	Relevant, included	These issues are relevant and included as situations arise.
Current implications of water on your key commodities/raw materials	Relevant, included	These issues are relevant and included as situations arise.
Current status of ecosystems and habitats at a local level	Relevant, included	These issues are relevant and included as situations arise.
Current river basin management plans	Relevant, included	These issues are relevant and included as situations arise.
Current access to fully-functioning WASH services for all employees	Relevant, included	These issues are relevant and included as situations arise.
Estimates of future changes in water availability at a local level	Relevant, not yet included	These issues have not been evaluated, but it is anticipated that they will be in the future.
Estimates of future potential regulatory changes at a local level	Relevant, included	These issues are relevant and included as situations arise.
Estimates of future potential stakeholder conflicts at a local level	Relevant, included	These issues are relevant and included as situations arise.
Estimates of future implications of water on your key commodities/raw materials	Relevant, included	These issues are relevant and included as situations arise.
Estimates of future potential changes in the status of ecosystems and habitats at a local level	Relevant, included	These issues are relevant and included as situations arise.
Scenario analysis of availability of sufficient quantity and quality of water relevant for your operations at a local level	Relevant, included	These issues are relevant and included as situations arise.
Scenario analysis of regulatory and/or tariff changes at a local level	Relevant, included	These issues are relevant and included as situations arise.
Scenario analysis of stakeholder conflicts concerning water resources at a local level	Relevant, included	These issues are relevant and included as situations arise.
Scenario analysis of implications of water on your key commodities/raw materials	Relevant, not yet included	These issues have not been evaluated, but it is anticipated that they will be in the future.
Scenario analysis of potential changes in the status of ecosystems and habitats at a local level	Relevant, included	These issues are relevant and included as situations arise.
Other		

**Which of the following stakeholders are always factored into your organization's water risk assessments?**

Stakeholder	Choose option	Please explain
Customers	Relevant, included	These stakeholders are relevant and included as situations arise.
Employees	Relevant, included	These stakeholders are relevant and included as situations arise.
Investors	Relevant, included	These stakeholders are relevant and included as situations arise.
Local communities	Relevant, included	These stakeholders are relevant and included as situations arise.
NGOs	Relevant, included	These stakeholders are relevant and included as situations arise.
Other water users at a local level	Relevant, included	These stakeholders are relevant and included as situations arise.
Regulators	Relevant, included	These stakeholders are relevant and included as situations arise.
River basin management authorities	Relevant, included	These stakeholders are relevant and included as situations arise.
Statutory special interest groups at a local level	Relevant, included	These stakeholders are relevant and included as situations arise.
Suppliers	Relevant, included	These stakeholders are relevant and included as situations arise.
Water utilities/suppliers at a local level	Relevant, included	These stakeholders are relevant and included as situations arise.
Other		

W2.8

Please choose the option that best explains why your organisation does not undertake a water-related risk assessment

Primary reason	Please explain
----------------	----------------

---

**Further Information**

**Module: Implications**

**Page: W3. Water Risks**

---

**W3.1**

**Is your organization exposed to water risks, either current and/or future, that could generate a substantive change in your business, operations, revenue or expenditure?**

Yes, direct operations and supply chain

---

**W3.2**

**Please provide details as to how your organization defines substantive change in your business, operations, revenue or expenditure from water risk**

The majority of our operations and supply chain takes place in Michigan, which has an abundant fresh water supply. Although the risks to our company are low at this time, the risks are expected to increase in the future (e.g. as regulations continue to change and challenge our industry). An example of a substantive change would be legislation or a 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.

---

**W3.2a**

**Please provide the number of facilities\* per river basin exposed to water risks that could generate a substantive change in your business, operations, revenue or expenditure and the proportion this represents of total operations company-wide**



Country	River basin	Number of facilities exposed to water risk	Proportion of total operations (%)	Comment
United States of America	St. Lawrence	8	91-100	There are eight 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 significant change in the water level within the watershed could put these facilities at risk of damage or losing production.

### W3.2b

Please provide the proportion of financial value that could be affected at river basin level associated with the facilities listed in W3.2a

Country	River basin	Financial reporting metric	Proportion of chosen metric that could be affected within the river basin	Comment
United States of America	St. Lawrence	% generation capacity	91-100	The amount of generation or production capacity lost by a significant change in the water level within the watershed could range from 0% to 100% depending on the nature of the event or situation. For example, a significant drop in water level could result in the loss of cooling water, and therefore generation or production, at one or more of the facilities.

### W3.2c

Please list the inherent water risks that could generate a substantive change in your business, operations, revenue or expenditure, the potential impact to your direct operations and the strategies to mitigate them

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
United States of America	St. Lawrence	Physical-Climate change Physical-Inadequate infrastructure	Other: Higher operating and capital costs	Changing water levels could require restructuring of cooling water intake structures (CWIS) and plant discharge structures.	>6 years	Unlikely	Unknown	Engagement with public policy makers Increased capital expenditure	Unknown	The company would perform a cost/benefit analysis to provide the information needed to make a decision.
United States of America	St. Lawrence	Regulatory-Regulation of discharge quality/volumes leading to higher compliance costs	Other: Higher operating and capital costs	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 recently revised coal combustion residuals (CCR)	Current-up to 1 year	Highly probable	High	Engagement with public policy makers Engagement with suppliers Increased capital expenditure Increased investment in new technology Other: Implement regulatory requirements	Unknown	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.

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				rule requires extensive changes to wastewater systems at some of our facilities.						
United States of America	St. Lawrence	Regulatory-Mandatory water efficiency, conservation, recycling or process standards	Higher operating costs	The company may have to change its operations (e.g. reduce output) in order to meet mandatory requirements.	Unknown	Unknown	Unknown	Other: Implement regulatory requirements	Unknown	The company would endeavor to negotiate favorable standards, but would ultimately comply with the regulatory requirements.
United States of America	St. Lawrence	Regulatory-Statutory water withdrawal limits/changes to water allocation	Higher operating costs	The company may have to change its operations (e.g. reduce output) in order to meet revised limits to water withdrawal.	Unknown	Unknown	Unknown	Other: Implement regulatory requirements	Unknown	The company would endeavor to negotiate favorable limits, but would ultimately comply with the regulatory requirements

W3.2d

Please list the inherent water risks that could generate a substantive change in your business operations, revenue or expenditure, the potential impact to your supply chain and the strategies to mitigate them

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
United States of America	St. Lawrence	Regulatory-Regulation of discharge quality/volumes leading to higher compliance costs	Supply chain disruption	The number of credible suppliers to address the revised ELGs related to flue gas desulphurization (FGD) wastewater treatment may be limited due to the high demand nationwide to meet the low discharge criteria that is being required by the federal government. This impact may put our company in jeopardy of meeting the revised limits.	1-3 years	Probable	High	Engagement with public policy makers Engagement with suppliers Increased capital expenditure Increased investment in new technology Supplier diversification Other: Engagement with advocacy groups.	Unknown	Specific to FGD wastewater treatment: The company is working with industry advocacy groups to devise a strategy for meeting the new ELG limits on selenium, arsenic, mercury and nitrate/nitrite. At present, the best available technology (BAT) being proposed does not appear to meet the anticipated limits. Other technologies are being investigated, and in some cases, pilot tested.

Please choose the option that best explains why you do not consider your organization to be exposed to water risks in your direct operations that could generate a substantive change in your business, operations, revenue or expenditure

Primary reason	Please explain
----------------	----------------

---

W3.2f

Please choose the option that best explains why you do not consider your organization to be exposed to water risks in your supply chain that could generate a substantive change in your business, operations, revenue or expenditure

Primary reason	Please explain
----------------	----------------

---

W3.2g

Please choose the option that best explains why you do not know if your organization is exposed to water risks that could generate a substantive change in your business operations, revenue or expenditure and discuss any future plans you have to assess this

Primary reason	Future plans
----------------	--------------

---

**Further Information**

W4.1

Does water present strategic, operational or market opportunities that substantively benefit/have the potential to benefit your organization?

Yes

W4.1a

Please describe the opportunities water presents to your organization and your strategies to realize them

Country or region	Opportunity	Strategy to realize opportunity	Estimated timeframe	Please explain
United States of America	Increased brand value Other: Shipping on the Great Lakes	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.

W4.1b

Please choose the option that best explains why water does not present your organization with any opportunities that have the potential to provide substantive benefit

Primary reason	Please explain
----------------	----------------

---

W4.1c

Please choose the option that best explains why you do not know if water presents your organization with any opportunities that have the potential to provide substantive benefit

Primary reason	Please explain
----------------	----------------

---

**Further Information**

**Module: Accounting**

**Page: W5. Facility Level Water Accounting (I)**

---

W5.1

**Water withdrawals: for the reporting year, please complete the table below with water accounting data for all facilities included in your answer to W3.2a**

Facility reference number	Country	River basin	Facility name	Total water withdrawals (megaliters/year) at this facility	How does the total water withdrawals at this facility compare to the last reporting year?	Please explain
Facility 1	United States of America	St. Lawrence	Belle River Power Plant	582609	About the same	Less than 1% difference when comparing 2014 to 2015.
Facility 2	United States of America	St. Lawrence	Connors Creek Power Plant	0	About the same	This facility no longer generates electric power and is in the process of being decommissioned.
Facility 3	United States of America	St. Lawrence	Fermi 2 Power Plant	68200	Higher	About 5% higher in 2015 when compared with 2014.
Facility 4	United States of America	St. Lawrence	Greenwood Energy Center	2	About the same	No change from 2014 to 2015.
Facility 5	United States of America	St. Lawrence	Harbor Beach Power Plant	0	Much lower	This facility stopped withdrawing water in early 2014 after ceasing power production in late 2013. The facility is in the process of being decommissioned.
Facility 7	United States of America	St. Lawrence	Monroe Power Plant	2116229	About the same	About 1% lower in 2015 when compared with 2014.
Facility 8	United States of America	St. Lawrence	River Rouge Power Plant	343300	Lower	About 15% lower in 2015 when compared with 2014 due to decreased production.
Facility 9	United States of America	St. Lawrence	St. Clair Power Plant	1109443	About the same	About 2% lower in 2015 when compared with 2014.
Facility 10	United States of America	St. Lawrence	Sibley Quarry	1991	About the same	About 2% lower in 2015 when compared with 2014.
Facility 11	United States of America	St. Lawrence	Taggart Compressor Station	18547	About the same	About 2% lower in 2015 when compared with 2014.



Facility reference number	Country	River basin	Facility name	Total water withdrawals (megaliters/year) at this facility	How does the total water withdrawals at this facility compare to the last reporting year?	Please explain
Facility 12	United States of America	St. Lawrence	Trenton Channel Power Plant	416448	Higher	About 12% higher in 2015 when compared with 2014 due to increased production.

#### Further Information

#### Page: W5. Facility Level Water Accounting (II)

#### W5.1a

**Water withdrawals:** for the reporting year, please provide withdrawal data, in megaliters per year, for the water sources used for all facilities reported in W5.1

Facility reference number	Fresh surface water	Brackish surface water/seawater	Rainwater	Groundwater (renewable)	Groundwater (non-renewable)	Produced/process water	Municipal water	Wastewater from another organization	Comment
Facility 1	582609	0.00	0.00	0.00	0.00	0.00	0.00	0.00	This facility withdrawals municipal water primarily for sanitary use, but the volume has not been reported.

Facility reference number	Fresh surface water	Brackish surface water/seawater	Rainwater	Groundwater (renewable)	Groundwater (non-renewable)	Produced/process water	Municipal water	Wastewater from another organization	Comment
Facility 2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	This facility withdrawals municipal water primarily for sanitary use, but the volume has not been reported.
Facility 3	68200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	This facility withdrawals municipal water primarily for sanitary use, but the volume has not been reported.
Facility 4	0.00	0.00	0.00	0.00	0.00	0.00	2	0.00	This facility withdrawals municipal water for both cooling water make up and for sanitary use. The number reported only represents the amount used for cooling water purposes.
Facility 5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	This facility withdrawals municipal water primarily for sanitary use, but the volume has not been reported.
Facility 7	2116229	0.00	0.00	0.00	0.00	0.00	0.00	0.00	This facility withdrawals municipal water

Facility reference number	Fresh surface water	Brackish surface water/seawater	Rainwater	Groundwater (renewable)	Groundwater (non-renewable)	Produced/process water	Municipal water	Wastewater from another organization	Comment
									primarily for sanitary use, but the volume has not been reported.
Facility 8	343300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	This facility withdrawals municipal water primarily for sanitary use, but the volume has not been reported.
Facility 9	1109443	0.00	0.00	0.00	0.00	0.00	0.00	0.00	This facility withdrawals municipal water primarily for sanitary use, but the volume has not been reported.
Facility 10	0.00	0.00	0.00	1991	0.00	0.00	0.00	0.00	This facility withdrawals municipal water primarily for sanitary use, but the volume has not been reported.
Facility 11	18547	0.00	0.00	0.00	0.00	0.00	0.00	0.00	This facility withdrawals municipal water primarily for sanitary use, but the volume has not been reported.
Facility 12	416448	0.00	0.00	0.00	0.00	0.00	0.00	0.00	This facility withdrawals municipal water

Facility reference number	Fresh surface water	Brackish surface water/seawater	Rainwater	Groundwater (renewable)	Groundwater (non-renewable)	Produced/process water	Municipal water	Wastewater from another organization	Comment
									primarily for sanitary use, but the volume has not been reported.

#### W5.2

Water discharge: for the reporting year, please complete the table below with water accounting data for all facilities included in your answer to W3.2a

Facility reference number	Total water discharged (megaliters/year) at this facility	How does the total water discharged at this facility compare to the last reporting year?	Please explain
Facility 1	574795	About the same	Less than 1% difference when comparing 2014 to 2015.
Facility 2	7	Higher	Approximately 17% higher in 2015 compared to 2014 due to additional wastewater discharged as part of decommissioning activities.
Facility 3	44858	Higher	Approximately 9% higher in 2015 compared to 2014 due to the need to discharge additional wastewater.
Facility 4	218	Lower	Approximately 44% lower in 2015 compared to 2014 due to the reduced need to discharge wastewater.
Facility 5	51	Lower	Approximately 32% lower in 2015 compared to 2014 due to the reduced need to discharge wastewater.
Facility 7	2083880	About the same	Approximately 2% lower in 2015 compared with 2014.
Facility 8	341083	Lower	Approximately 15% lower in 2015 compared to 2014 due to the reduced need to discharge wastewater.
Facility 9	1102562	About the same	Approximately 2% lower in 2015 compared with 2014.

Facility reference number	Total water discharged (megaliters/year) at this facility	How does the total water discharged at this facility compare to the last reporting year?	Please explain
Facility 10	1991	About the same	Approximately 2% lower in 2015 compared with 2014.
Facility 11	18522	About the same	Approximately 2% lower in 2015 compared with 2014.
Facility 12	413502	Higher	Approximately 12% higher in 2015 compared to 2014 due to the increased need to discharge wastewater.

#### W5.2a

**Water discharge: for the reporting year, please provide water discharge data, in megaliters per year, by destination for all facilities reported in W5.2**

Facility reference number	Fresh surface water	Municipal/industrial wastewater treatment plant	Seawater	Groundwater	Wastewater for another organization	Comment
Facility 1	574795	0.00	0.00	0.00	0.00	This facility discharges water to a Municipal Treatment Plant primarily for sanitary use, but the volume has not been reported.
Facility 2	6	1	0.00	0.00	0.00	This facility discharges water to a Municipal Treatment Plant for both sanitary use and process water disposal, but the volume for sanitary use has not been reported.
Facility 3	44832	26	0.00	0.00	0.00	This facility discharges water to a Municipal Treatment Plant for both sanitary use and process water disposal, but the volume for sanitary use has not been reported.
Facility 4	218	0.00	0.00	0.00	0.00	This facility discharges water to a Municipal Treatment Plant primarily for sanitary use, but the volume has not been reported.
Facility 5	51	0.00	0.00	0.00	0.00	This facility discharges water to a Municipal Treatment Plant primarily for sanitary use, but the volume has not

Facility reference number	Fresh surface water	Municipal/industrial wastewater treatment plant	Seawater	Groundwater	Wastewater for another organization	Comment
						been reported.
Facility 7	2083880	0.00	0.00	0.00	0.00	This facility discharges water to a Municipal Treatment Plant primarily for sanitary use, but the volume has not been reported.
Facility 8	341083	0.00	0.00	0.00	0.00	This facility discharges water to a Municipal Treatment Plant primarily for sanitary use, but the volume has not been reported.
Facility 9	1102562	0.00	0.00	0.00	0.00	This facility discharges water to a Municipal Treatment Plant primarily for sanitary use, but the volume has not been reported.
Facility 10	1991	0.00	0.00	0.00	0.00	This facility discharges water to a Municipal Treatment Plant primarily for sanitary use, but the volume has not been reported.
Facility 11	18522	0.00	0.00	0.00	0.00	This facility discharges water to a Municipal Treatment Plant primarily for sanitary use, but the volume has not been reported.
Facility 12	413502	0.00	0.00	0.00	0.00	This facility discharges water to a Municipal Treatment Plant primarily for sanitary use, but the volume has not been reported.

### W5.3

**Water consumption: for the reporting year, please provide water consumption data for all facilities reported in W3.2a**

Facility reference number	Consumption (megaliters/year)	How does this compare to the last reporting year?	Please explain
Facility 1	7519	About the same	Approximately 3% higher in 2015 compared with 2014.
Facility 2	0	About the same	No change.

Facility reference number	Consumption (megaliters/year)	How does this compare to the last reporting year?	Please explain
Facility 3	23368	About the same	Approximately 2% lower in 2015 compared with 2014.
Facility 4	296	About the same	Approximately 3% higher in 2015 compared with 2014.
Facility 5	0	About the same	No change.
Facility 7	32339	About the same	Approximately 4% higher in 2015 compared with 2014.
Facility 8	2202	Higher	Approximately 15% higher in 2015 compared with 2014 due to seasonal variability in the local weather.
Facility 9	6869	About the same	Approximately 4% lower in 2015 compared with 2014.
Facility 10	0	About the same	No change.
Facility 11	26	Lower	Approximately 32% lower in 2015 compared with 2014 due to seasonal variability in the local weather.
Facility 12	3113	Lower	Approximately 22% lower in 2015 compared with 2014 due to seasonal variability in the local weather.

#### W5.4

For all facilities reported in W3.2a what proportion of their water accounting data has been externally verified?

Water aspect	% verification	What standard and methodology was used?
Water withdrawals- total volumes	Not verified	
Water withdrawals- volume by sources	Not verified	None.
Water discharges- total volumes	Not verified	None.
Water discharges- volume by destination	Not verified	None.
Water discharges- volume by treatment method	Not verified	None.
Water discharge quality data- quality by standard effluent parameters	1-25	USEPA approved analytical methods were used on some of the effluent parameters required by NPDES permits.
Water consumption- total volume	Not verified	None.

---

**Further Information**

**Module: Response**

**Page: W6. Governance and Strategy**

---

**W6.1**

**Who has the highest level of direct responsibility for water within your organization and how frequently are they briefed?**

Highest level of direct responsibility for water issues	Frequency of briefings on water issues	Comment
Senior Manager/Officer	Sporadic-as important matters arise	

---

**W6.2**

**Is water management integrated into your business strategy?**

Yes

---

**W6.2a**

**Please choose the option(s) below that best explain how water has positively influenced your business strategy**



Influence of water on business strategy	Please explain
Tighter operational performance standards	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.
Other: Increased investment opportunities.	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.
Water resource considerations are factored into site expansions	As actions are underway to close several coal fired plants in the next 4 to 7 years, the Company is considering constructing new electric generation. Several of the main considerations for this expansion are based on the availability of water and the condition of CWIS components at existing facilities.
Greater regulator engagement	Coming into compliance with the new ELG rule gives the Company opportunity to engage with state regulators to craft a strategy that benefits all parties.

**W6.2b**

**Please choose the option(s) below that best explains how water has negatively influenced your business strategy**

Influence of water on business strategy	Please explain
Closure of operations	The new ELG rule as referenced above has contributed to announcing closure of several facilities in the next 4 to 7 years, which pose great challenges for the Company. Plant closures represent significant changes in business operations, and are typically viewed as negative impacts.
Increased capital expenditure	Replacing assets that are schedule to retires, and complying with the revised rules related to water, require extensive capital investments. These investments can place a strain on the Company, its investors, and its customers.

**W6.2c**

Please choose the option that best explains why your organization does not integrate water management into its business strategy and discuss any future plans to do so

Primary reason	Please explain
----------------	----------------

---

**W6.3**

**Does your organization have a water policy that sets out clear goals and guidelines for action?**

Yes

---

**W6.3a**

**Please select the content that best describes your water policy (tick all that apply)**

Content	Please explain why this content is included
Select facilities only Performance standards for direct operations Performance standards for supplier, procurement and contracting best practice	Extensive time and effort is being expended to methodically comply with the revised rules related to water (e.g. ELG and 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.

---

**W6.4**

How does your organization's water-related capital expenditure (CAPEX) and operating expenditure (OPEX) during the most recent reporting year compare to the previous reporting year?

Water CAPEX (+/- % change)	Water OPEX (+/- % change)	Motivation for these changes
		The cells for CAPEX and OPEX are left blank because the company's accounting mechanisms do not fully segregate CAPEX and OPEX costs related to water.

---

**Further Information**

**Page: W7. Compliance**

---

**W7.1**

**Was your organization subject to any penalties, fines and/or enforcement orders for breaches of abstraction licenses, discharge consents or other water and wastewater related regulations in the reporting year?**

Yes, not significant

---

**W7.1a**

**Please describe the penalties, fines and/or enforcement orders for breaches of abstraction licenses, discharge consents or other water and wastewater related regulations and your plans for resolving them**

Facility name	Incident	Incident description	Frequency of occurrence in reporting year	Financial impact	Currency	Incident resolution
St. Clair Power Plant (Facility #9 in this CDP report)	Fine	Less than 1 gallon of oil was released from a failed cooler into the St. Clair River on 4/20/2015, causing a sheen on the surface of the receiving water. The United States Coast Guard (USCG) inspected the release and imposed a \$500 fine.	1	500	USD(\$)	The Company properly reported the incident and paid the fine to the USCG.

#### W7.1b

What proportion of your total facilities/operations are associated with the incidents listed in W7.1a

9%

#### W7.1c

Please indicate the total financial impacts of all incidents reported in W7.1a as a proportion of total operating expenditure (OPEX) for the reporting year. Please also provide a comparison of this proportion compared to the previous reporting year

Impact as % of OPEX	Comparison to last year
0	Higher

#### Further Information

The format for the information provided in W7.1c does not allow the Company to accurately report the impact of fine described in W7.1a. First, the fine in 2015 is higher than 2014 because there were no fines in 2014. Second, the fine of \$500 USD is so small compared to OPEX that there are not enough allowable decimal places to show the true percentage. The amount of the fine is considered negligible in terms of impact to the Company.

**Page: W8. Targets and Initiatives**

---

**W8.1**

**Do you have any company wide targets (quantitative) or goals (qualitative) related to water?**

No

---

**W8.1a**

Please complete the following table with information on company wide quantitative targets (ongoing or reached completion during the reporting period) and an indication of progress made

Category of target	Motivation	Description of target	Quantitative unit of measurement	Base-line year	Target year	Proportion of target achieved, % value
--------------------	------------	-----------------------	----------------------------------	----------------	-------------	--

---

**W8.1b**

Please describe any company wide qualitative goals (ongoing or reached completion during the reporting period) and your progress in achieving these

Goal	Motivation	Description of goal	Progress
------	------------	---------------------	----------

---

**W8.1c**

**Please explain why you do not have any water-related targets or goals and discuss any plans to develop these in the future**

There are water related targets and goals, but they are business unit specific rather than company wide (e.g. reduce number of NPDES noncompliances). In addition, these targets and goals are for internal use only.

---

**Further Information**

**Module: Linkages/Tradeoff**

**Page: W9. Managing trade-offs between water and other environmental issues**

---

**W9.1**

**Has your organization identified any linkages or trade-offs between water and other environmental issues in its value chain?**

Yes

---

**W9.1a**

**Please describe the linkages or trade-offs and the related management policy or action**

Environmental issues	Linkage or trade-off	Policy or action
----------------------	----------------------	------------------

Environmental issues	Linkage or trade-off	Policy or action
Recent changes to the Effluent Limitations Guidelines rule (ELG - water related) and Coal Combustion Residual rule (CCR - soild waste related) have linkage	Linkage	The Company is crafting a compliance strategy that takes into consideration and links both rules. For example, the Company is seeking to modify a NPDES permit (ELG) in a manner that addresses a CCR impoundment closure (CCR).

---

**Further Information**

**Module: Sign Off**

**Page: Sign Off**

---

**W10.1**

Please provide the following information for the person that has signed off (approved) your CDP water response

Name	Job title	Corresponding job category
Nicholas J. Chuey	Senior Environmental Engineer	Other: Individual Contributor

---

**W10.2**

Please select if your organization would like CDP to transfer your publicly disclosed response strategy from questions W1.4a, W3.2c and W3.2d to the CEO Water Mandate Water Action Hub.

No

---

**Further Information**

**CDP 2016 Water 2016 Information Request**