

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

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

General Motors is one of the world's largest automakers and traces its roots in the U.S. back to 1908. Based in Detroit, Michigan, GM employs over 215,000 people in 396 facilities across six continents.

GM offers a comprehensive range of vehicles and services in more than 120 countries around the world. The largest national market for its products is China, followed by the U.S., Brazil, United Kingdom, Germany, Canada and Italy. Along with its strategic partners, GM produces cars and trucks, and sell and service these vehicles through the following brands: Chevrolet and Cadillac globally, and Baojun, Buick, GMC, Holden, Isuzu, Jiefang, Opel, Vauxhall, and Wuling in certain regions or specific countries.

GM also maintains equity stakes in major joint ventures in China including SAIC-GM, SAIC-GM-Wuling, FAW-GM and GM Korea, as well as subsidiaries such as OnStar, a recognized industry leader in vehicle safety, security and information services.

On November 18, 2010, GM completed one of the world's largest initial public offerings as the new General Motors Company. More information on the new GM is available at [www.gm.com](http://www.gm.com).

GM's commitment to sustainability applies to every part of our business and creates value for customers. It underscores GM's philosophy of "Customer-Driven Sustainability" – an approach for meeting customers' needs through sustainability by making the mobile experience safer, more efficient and better integrated with everyday life. As part of that commitment and philosophy, it continually assesses and takes steps to reduce the environmental impact of its products and operations. Focusing on areas such as energy management, carbon and waste intensity reduction, resource preservation and more efficient vehicles through its technological advances, global reach and innovative employees, helps the Company reduce its environmental footprint and also share best practices around the world for broad results.

Sustainability is also an important part of GM's people and culture. The Company integrates sustainability across every business function and through each level of the organization. GM is actively engaged in cross-functional efforts to seize environmental and social opportunities to improve our Company and the communities in which we operate.

The GM Environmental Principles are the foundation for the Company's environmental efforts and regional-specific policies around the world. Developed over 20 years ago, the Environmental Principles state:

As a responsible corporate citizen, GM is dedicated to protecting human health, natural resources, and the global environment. This dedication reaches further than compliance with the law to encompass the integration of sound environmental practices into our business decisions.

The following environmental principles provide guidance to GM personnel worldwide in the conduct of their daily business practices.

- We are committed to actions to restore and preserve the environment.
- We are committed to reducing waste and pollutants, conserving resources, and recycling materials at every stage of the product life cycle.

- We will continue to participate actively in educating the public regarding environmental conservation.
- We will continue to pursue vigorously the development and implementation of technologies for minimizing pollutant emissions.
- We will continue to work with all governmental entities for the development of technically sound and financially responsible environmental laws and regulations.
- We will continually assess the impact of our plants and products on the environment and the communities in which we live and operate with a goal of continuous improvement.

GM also maintains Environmental Performance Criteria (GM EPC) to support the consistent implementation of the GM Environmental Principles across the globe, particularly where regulatory programs do not clearly address those goals. The GM EPC supplements applicable legal requirements by setting baseline environmental management and performance regardless of where GM operations are located. The GM EPC provides a common process for planning and implementing resource conservation and pollution prevention or control measures.

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## 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

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## 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 operational control is exercised

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## 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

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**W0.4a**

**Exclusions**

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

Exclusion	Please explain why you have made the exclusion
Water from Small insignificant facilities.	Water use and risk is not relevant. An example of these are: Small non-manufacturing facilities - field offices, training centers, and other small facilities are omitted due to de minimis water use. Based on our benchmarking activities with other Auto OEMs, GM may be the only one that includes all of our non-manufacturing operations in water management.

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**Further Information**

**Module: Current State**

**Page: W1. Context**

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**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	Vital for	Important	In each of the countries that we operate, sufficient amounts of good quality freshwater are needed for

Water quality and quantity	Direct use importance rating	Indirect use importance rating	Please explain
good quality freshwater available for use	operations		direct use as drinking water for 215,000 employees and to manufacture vehicles. Supply chains built on strong, transparent and trusted partnerships are critical to ensuring product quality, availability and affordability for our customers. These partnerships are vital to improving our business competitiveness and lowering business risks.
Sufficient amounts of recycled, brackish and/or produced water available for use	Neutral	Neutral	In each of the countries that we operate, sufficient amounts of good quality freshwater are needed for drinking water for 215,000 employees and to manufacture vehicles. If this is not available, GM will use other sources - recycled or brackish water, but it is less desirable as the treatment costs and Greenhouse gas (GHG) emissions are greater. To reduce cost and GHG emissions, GM's value chain typically operates nearby GM manufacturing facilities and sufficient amounts of good quality freshwater are needed for drinking water for their employees and to manufacture automobile vehicle parts. Our value chain will use other sources - recycled or brackish water, but it is less desirable as the treatment costs and Greenhouse gas (GHG) emissions are greater.

**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	Similar to Greenhouse gas and energy, water management is integrated into GM's manufacturing business plan. Monthly and in some facilities, hourly meter readings of water withdrawal are used to track progress to targets established to meet our Company goal of 15% reduction in intensity (M3/Vehicle) by 2020 from 2010 baseline.
Water withdrawals- volume by sources	76-100	Similar to Greenhouse gas and energy, water management is integrated into GM's manufacturing business plan. Monthly and in some facilities, hourly meter readings of water withdrawal are used to track progress to targets established to meet our Company goal of 15% reduction in intensity (M3/Vehicle) by 2020 from 2010 baseline. The source of the water is tracked also in categories of municipal, well, surface, or rainwater.
Water discharges- total	76-100	Major facilities track volumes of sewer discharge and destination to either waterways or local publicly

Water aspect	% of sites/facilities/operations	Please explain
volumes		owned treatment works for either regulatory reasons and/or billing purposes.
Water discharges- volume by destination	76-100	Major facilities track volumes of sewer discharge and destination to either waterways or local publicly owned treatment works for either regulatory reasons and/or billing purposes. All facilities that are required by law to track discharge volumes comply, by monitoring discharge volumes including destination.
Water discharges- volume by treatment method	76-100	Major facilities track volumes of sewer discharge and treatment method for regulatory reasons. All facilities that are required by law to track discharge treatment method comply by monitoring volume by treatment method. Plants that have only one treatment method and will only track total discharge.
Water discharge quality data- quality by standard effluent parameters	76-100	Major facilities track sewer discharge and quality data for regulatory reasons. All facilities that are required by law to track discharge quality data regularly monitor discharge quality.
Water consumption- total volume	76-100	As water consumption is a calculation of withdrawal minus discharge, for the majority of our facilities, this is accomplished by direct measurement and for remainder we use extrapolation where discharge volumes are not measured.
Facilities providing fully-functioning WASH services for all workers	76-100	All of our facilities provide clean water for drinking, cooking and cleaning purposes, adequate facilities for excreta purposes, solid waste management and drainage, and hygiene information and education.

## 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	2850.13	Much higher	Improved allocation of withdrawal sources resulted in an increase; whereas, overall water use reduced on an absolute basis by 1%
Brackish surface water/seawater	0	Not applicable	
Rainwater	4.09	Higher	Increase use of rainwater due to higher local rainfall in 2015.

Source	Quantity (megaliters/year)	How does total water withdrawals for this source compare to the last reporting year?	Comment
Groundwater - renewable	2499.63	Much lower	Improved allocation of withdrawal sources resulted in an increase; whereas, overall water use reduced on an absolute basis by 1%
Groundwater - non-renewable	997.96	Much lower	Increased conservation and efficiency drove non-renewable water use lower in 2015. Additionally, GM is in the process of evaluating additional recycle and reuse processes in a water stressed facility in Mexico.
Produced/process water	0	Not applicable	
Municipal supply	35084.07	About the same	GM reduced water withdrawal on an absolute basis
Wastewater from another organization	0	Not applicable	
Total	41435.88	Lower	GM reduced absolute water use by 1% with conservation and efficiency. Overall GM reduced water intensity, M3/Vehicle by 10% since 2010 and are ahead of our 2020 glide path target of 15%.

**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	16846.70	About the same	GM reduced absolute water use by 1% with conservation and efficiency. Overall GM reduced water intensity, M3/Vehicle by 10% since 2010 and are ahead of our 2020 glide path target of 15%. This includes some storm water treatment and condensate that is not included in our withdrawal since it is not used in the facility.
Brackish surface water/seawater	0	Not applicable	
Groundwater	229.17	About the same	GM has a zero liquid discharge facility in Mexico and other recycling facilities that dry

Destination	Quantity (megaliters/year)	How does total water discharged to this destination compare to the last reporting year?	Comment
			small amounts of final discharges to solar ponds.
Municipal/industrial wastewater treatment plant	20012.02	About the same	GM reduced absolute water use by 1% with conservation and efficiency. Overall GM reduced water intensity, M3/Vehicle by 10% since 2010 and are ahead of our 2020 glide path target of 15%. This includes some storm water treatment that is not included in our withdrawal since it is not used in the facility.
Wastewater for another organization		Not applicable	
Total	46250.6	About the same	

#### 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
29005.12	Lower	GM reduced absolute water use by 1% with conservation and efficiency. Overall GM reduced water intensity, M3/Vehicle by 10% since 2010 and are ahead of our 2020 glide path target of 15%. The consumption value is estimated due to a mix of withdrawal water and non-contact and storm water and is based on water balance calculations.

#### W1.3

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

Yes

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**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
1-25	51-75	GM joined CDP Water Supply Chain in 2014 to improve our engagement of our supply chain in water use globally. We selected high impact suppliers that represent a significant amount spend in our supply chain and who also participate with us in CDP Climate Change Supply Chain.

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**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
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**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	Other: Multiple	Reg-Higher water prices	Higher operating costs	Water and Sewer rates increased in 2015 compared to 2014. Local utilities have high fixed costs and water conservation can result in higher rates to consumers.	Estimated at 3-5 years	Rates increased by 3% in 2015 vs. 2014 resulting in \$1 Million USD increased cost.	Infrastructure investment Increased capital expenditure Increased investment in new technology Promote best practice and awareness	Higher cost of water and sewer drives an increase in investment in water efficiency and conservation as the business case increased the benefit of cost savings. As an example, GM invested \$2M at our Detroit Facility to increase the storage of storm water and added treatment to reduce the discharge by recycling the water for production use. This has an added benefit for the City of Detroit to reduce their combined sanitary and storm water flow during peak times that cause untreated discharge to Lake Erie.
Brazil	Other: multiple	Phys-Dependency on hydropower Phys-Drought Phys-Increased water scarcity	Higher operating costs	Increased water rates drove costs higher in 2015 at \$2.1 Million USD due to drought conditions in local areas from increased water cost and \$5.9 Million USD in increased electric costs due to lower hydro electric supply. GM's response was increased conservation and	Estimated 2 years	\$8 Million USD	Engagement with other stakeholders in the river basin Increased capital expenditure Increased investment in new	Higher cost of water and electric rates drives an increase in conservation. The potential lack of available water services drove additional water conservation and use of recycled water for process and increased electric rates drove increased energy conservation .

Country	River basin	Impact indicator	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
		Reg-Higher water prices Reg-Regulatory uncertainty		use of recycled water in processes and energy reduction to offset these rate increases.			technology Promote best practice and awareness	
Mexico	Other: Multiple	Phys-Increased water scarcity Phys-Increased water stress	Higher operating costs	Increased Water stress on non-renewable wells at one plant with 300 Meter wells will be reduced using reuse of water requiring significant investment.	Estimated 2 Years	\$10 Million USD estimate	Increased capital expenditure	Engineering underway to plan for new equipment due to stress on non-renewable wells.

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
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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
Comprehensive company-wide risk assessment	Direct operations and supply chain	All facilities and some suppliers	Using the Global Water tool (WBCSD) and Aqueduct (WRI) water risk evaluation tools out to 2025 provides a comparison of water risks known in 2015 to those predicted in 2025. Comparing the future growth geographies in our 6 year business plan, shows that the risks are similar, but getting worse in these areas. Based on our current mitigation plan, future manufacturing planning will incorporate additional measures related to water efficiency and conservation. In 2015, GM participated in CDP Water Supply Chain to assess water risk in the supply chain and we performed a life cycle analysis of water use in auto part production in our supply chain on a country specific basis and down to the fourth tier.

**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
Annually	Facility	>6 years	Using water risk evaluation tools out to 2025 provides a comparison of risks in 2015 to those in 2025.

Frequency	Geographic scale	How far into the future are risks considered?	Comment
			Comparing future growth in our 6 year business plan, shows that the risks are getting worse in the water stressed areas in Mexico. Based on our current mitigation plan, future manufacturing planning will incorporate additional measures related to water efficiency and conservation. We began similar activities for our supply chain.using life cycle analysis for our 18,000 suppliers.

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**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 5 years

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**W2.4a**

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

As a clean water supply is vital to our operations, GM uses water stress tools - Global Water tool (WBCSD) and Aqueduct (WRI) to asses water stress in our global facilities areas as a screening tool. A more detailed specific local area water availability analysis is performed prior to facility siting for future operations. Similar to past practice, if other factors point to success for growth and water is a risk factor, GM would use zero liquid discharge technology (waste water reuse in processes).

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**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
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## W2.5

Please state the methods used to assess water risks

Method	Please explain how these methods are used in your risk assessment
Life Cycle Assessment WBCSD Global Water Tool WRI Aqueduct Other: Local Site Utility Managers assess local water stress conditions	Life Cycle assessment using CEDA 5 database from Climate Earth provides use information to supplier level, by tier, and at industry level. The WBCSD Global Water Tool and WRI Aqueduct models provide a screening tool to identify potential water stressed areas globally.

## 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	Each major manufacturing facility has a site utility manager that monitors water supply availability and quality.
Current water regulatory frameworks and tariffs at a local level	Relevant, included	Each major manufacturing facility has a site utility manager that is responsible to know local regulations and tariffs for water supply as well as an environmental engineer that focuses on regulations and compliance.
Current stakeholder conflicts concerning water resources at a local level	Relevant, included	As water risk management is a locally managed function, a manufacturing facility monitors local external stakeholder conflicts - community residents, non-governmental organizations, and other Company's activities that include water resources.

Issues	Choose option	Please explain
Current implications of water on your key commodities/raw materials	Relevant, included	GM conducted a water life cycle analysis at a part and supplier level to the tier 6 level for auto components suppliers to identify the major users of water to quantify current and future implications in our supply chain
Current status of ecosystems and habitats at a local level	Relevant, included	GM relies on IBAT (Integrated Biodiversity Assessment Tool created/maintained by the IBAT Alliance) to assess the current status of ecosystems and habitats at a local level as follows: a) Reports were generated using the IBAT tool in 2015 and distributed to all sites globally. b) In addition, GM has a commitment to have all manufacturing sites implement programs to manage their corporate lands in a way that benefits wildlife by 2020.
Current river basin management plans	Relevant, included	Each facility has a dedicated environmental engineer that monitors regulatory river basin management plans and voluntary initiatives.
Current access to fully-functioning WASH services for all employees	Relevant, included	As water for personal use is essential to our facility operations, our global facilities engineering teams plan for sufficient water for building occupants.
Estimates of future changes in water availability at a local level	Relevant, included	GM applied the Global Water tool and Aqueduct to all of our major manufacturing facility locations which projects risk to 2025.
Estimates of future potential regulatory changes at a local level	Relevant, included	GM applied the Aqueduct tool to all of our major manufacturing facility locations which projects regulatory water risk to 2025.
Estimates of future potential stakeholder conflicts at a local level	Relevant, included	GM applied the Aqueduct tool to all of our major manufacturing facility locations which projects reputational, media water risk to 2025.
Estimates of future implications of water on your key commodities/raw materials	Relevant, not yet included	GM conducted a water life cycle analysis at a part and supplier level to the tier 4 level for auto components suppliers to identify the major users of water and quantify current and future implications in our supply chain. In 2015, we included the analysis at the country level for our supply chain manufacturing auto parts that will be used in the future to further refine our risk analysis of commodities related to water.
Estimates of future potential changes in the status of ecosystems and habitats at a local level	Relevant, included	GM applied the Aqueduct tool to all of our major manufacturing facility locations which projects reputation, media water risk to 2025.
Scenario analysis of availability of sufficient quantity and quality of water relevant for your operations at a local level	Relevant, included	Local facilities evaluate future indicators of water availability from local utilities when expansion plans indicate significant water use increases.
Scenario analysis of regulatory and/or tariff changes at a local level	Relevant, included	Local sites have regular contact with local water supply utilities to understand the future years cost and regulations changes for annual future budget
Scenario analysis of stakeholder conflicts concerning water resources at a local level	Relevant, included	Local sites are aware of current stakeholder conflicts and use this feedback for future planning of potential water use increases.
Scenario analysis of implications of	Relevant, not	In 2015, we conducted a life cycle analysis of water in our automotive parts supply chain at the country

Issues	Choose option	Please explain
water on your key commodities/raw materials	yet included	level that will be used in the future to further refine our risk analysis of commodities related to water.
Scenario analysis of potential changes in the status of ecosystems and habitats at a local level	Relevant, included	For major changes at sites, we survey to identify site elements and adopt a master plan for developing the project site, carefully site the building to minimize disruption to existing ecosystems and design the building to minimize its footprint. For previously developed sites, use local and regional governmental agencies, consultants, educational facilities and native plant societies as resources for the selection of appropriate native or adapted plants.
Other	Not evaluated	

## W2.7

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

Stakeholder	Choose option	Please explain
Customers	Relevant, included	Water in the life cycle of the use phase of a GM automobile is 48 times more intensive than our own manufacturing use. The majority of the use phase water use is for fuel production. Achievement of GM's climate change public goals to reduce vehicle emissions will help to reduce the water consumption in the vehicle use phase. An example of customer training is through visual management of fuel economy in our vehicles.
Employees	Relevant, included	As water management is integrated into GM's business plan, along with safety, quality, and cost at a facility level, employees are involved in the plans and metrics as a normal course of business. Each major facility has a site utility manager dedicated to water management.
Investors	Relevant, included	GM uses CDP Water report to inform investors on our water stress and management practices.
Local communities	Relevant, included	Since we share the water sources with the local communities, they are always included as stakeholders. Additionally, in North America, we have long-standing partnerships developed among our employees, local watershed groups and schools, all focused on watershed education through the Global Rivers Environmental Education Network (GREEN) program, now in its 25th year.
NGOs	Relevant, included	GM uses CDP Water report to inform NGOs, in general on our water stress and management practices and focuses on specific areas as applicable. We partner with groups like Global Environmental and Technology Foundation and WRI

Stakeholder	Choose option	Please explain
		on water related issues.
Other water users at a local level	Relevant, included	Since we share the water sources with the local communities, GM participates with community groups at a local level including other users as stakeholders to understand water supply, quality, and risks at the local level.
Regulators	Relevant, included	GM has a team at central office and each major facility focused on Environmental compliance and sustainability that engages with regulators. Regulators are a key stakeholder as they drive compliance requirements for our facilities.
River basin management authorities	Relevant, included	GM has a team at central office and each major facility focused on Environmental compliance and sustainability. River basin authorities are a key stakeholder as they drive compliance requirements for some of our facilities as applicable.
Statutory special interest groups at a local level	Relevant, included	Since we share the water sources with the local communities, special interest groups are always included as stakeholders.
Suppliers	Relevant, included	GM conducted a life cycle analysis of water use in our supply chain and found water use significant with 50 times the use compared to our own operations. GM became members of CDP Water Supply Chain in 2014 and included suppliers in our comprehensive water management strategy. The vehicle interior is the major area of water use, electric power generation is the major industry using water, and the Tier 1 suppliers are only 11% of the total with the Tier 2 greatest at 33%.
Water utilities/suppliers at a local level	Relevant, included	Where we receive water services from a local municipality, the supplier is a key stakeholder.
Other	Not evaluated	

W2.8

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

Primary reason	Please explain
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Further Information

**Module: Implications**

**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 only

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**W3.2**

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

GM has a Chief Risk Officer that reports both to the CFO as well as to the Board of Directors. The CRO is responsible for GM's enterprise and operational risk management plan and processes including identifying and assessing Company and asset level risks. GM's risk and opportunities identification process is as follows:

- Executives from GM's various functions and geographic locations have been appointed as risk officers
- Annually, these risk officers identify, evaluate and assess various Company and asset risks and opportunities. Risk officers review results with their respective Executive Leadership Team (ELT)

(i) Company level Risks and opportunities are categorized as Tier 1, 2 or 3 based on frequency, how quickly they may materialize, and on their potential impact to the company. Impact may be measured by a number of variables - reputation, operations, revenue, etc.

- All Tier 1 have approved mitigation plans, and are reviewed in detail regularly by the ELT and by the Board.

- All Tier 2 risks have approved mitigation plans and are reviewed at least once a year by the ELT and by the BOD.

- All Tier 3 risks have been fully analysed, put on a "watch list" and are regularly reviewed by CRO and the respective ELT member.

(ii) Water Risks identified as Asset level risks have mitigation plans that are responsibility of day-to-day management. Exposure to and experience with catastrophic risk or losses related to water are continuously analyzed and reviewed for ongoing operations and when evaluating new sites and supplier selection. Asset level risks are generally those that are anticipated to occur with regular or high frequency, but have an overall low impact on the Company and can be absorbed by the reserves on the annual balance sheet. Lessons learned are incorporated into future site planning, supplier selection process, and risk mitigation planning and strategic development.

While the risks related to water at individual GM facilities is not substantive in total to GM, our operations in Mexico, especially in San Luis Potosi, Silao, and Ramos Arizpe have water risks that cause GM to substantially modify our operating plans since the risk is substantive at a local level. This includes additional spending for Zero Liquid Discharge and other levels of water reuse to minimize the impact to the local community and GM's operations.

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**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
Mexico	Other: Lerma Chapala	1	1-5	Silao Mexico plant is experiencing depletion of non-renewable wells. Plans are being made to implement near zero liquid discharge to preserve the wells as well as other water efficiency and conservation measures.

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**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
Mexico	Other: Lerma Chapala	% global production volume	1-5	As the community expands manufacturing, GM is planning to implement water reuse to avoid water stress in the area.

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**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
Mexico	Other: Lerma Chapala	Physical-Increased water stress	Higher operating costs	Non-Renewable wells are stressed with increased local area development.	1-3 years	Probable	Medium-high	Increased capital expenditure	Installing near zero liquid discharge system to recycle water similar to another GM facility in Mexico will cost an estimated \$10 Million USD	Engineer and install water reuse equipment to recycle the plant water for reuse using membrane and other technologies.

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
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W3.2e

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
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**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
Risks exist, but no substantive impact anticipated	Existing supply chain mitigation plans have been successful to ensure that water risk at GM suppliers do not result in substantive risks. Future risks continue to be evaluated to determine if the potential for substantive risk is a concern in GM's supply chain. This is consistent with the 2015 responses from CDP Water Supply Chain, where 6% reported detrimental impacts. The majority (55%) have integrated water management into their business plan, similar to GM to continuously improve.

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**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
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**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
Mexico	Increased brand value Improved community relations Improved water efficiency	Manufacturing vehicles in the water stressed area of San Luis Potisi provided GM an opportunity to show our leadership in water reduction, recycle, and reuse. The vehicle and transmission manufacturing facilities have zero liquid discharge based on the innovative facility design and operations.	>6 years	Providing jobs in a water stressed area while having minimum impact on the aquifer provides positive local, regional, and global recognition of the extreme efforts taken by GM to protect and conserve one of our most precious and important natural resources. A one half percentage increase in market share represents a potential of increasing net income by \$20 Million (USD).
Brazil	Improved community relations Improved water efficiency	Waste water at our Joinville engine plant is treated in a contained wetland and further reclaimed and is reused as water make up to cooling towers reducing the impact of water withdrawal on local aquifer.	>6 years	Providing jobs in a water stressed area while having minimum impact on the aquifer provides positive local, regional, and global recognition of the extreme efforts taken by GM to protect and conserve one of our most precious and important natural resources. A one half percentage increase in market share represents a potential of increasing net income by \$20 Million (USD).
Company-wide	Improved water efficiency	Global Bill-of-Process and Technical Requirements for new installations (e.g.paint shops) are employed to ensure the latest process best practices are utilized.	Current-up to 1 year	Efficient 3 and 4 stage cascading rinse systems, high efficiency RO systems, real-time department water meters and process water meters are specified for all new paint shops. Pilot testing is underway for a new technology to reuse rinse system wastewater.
Company-	Improved	New High Purity Water Systems (Reverse	Current-up	New Reverse Osmosis installations are specified to be 85%

Country or region	Opportunity	Strategy to realize opportunity	Estimated timeframe	Please explain
wide	water efficiency	Osmosis) for paint shops are now specified to be more efficient, rejecting 40% less water than typical RO systems.	to 1 year	efficient (typical is 75%). Pilot testing is underway for technology to reduce reject water by another 75%.
United States of America	Cost savings Improved community relations Improved water efficiency	Alternate sources of water - Assembly Plant in Detroit installed a system to use up to 200 Million gallons of water a year that would otherwise go to a combined sewer system that has issues with combined sewer overflows during heavy rain events.	Current-up to 1 year	A new 40 Million gallon pond was constructed to handle a 100-year storm event. Stormwater is treated and pumped through multimedia filtration for use in cooling towers and paint sludge. Additional water is further treated through carbon filtration and directed to reverse osmosis to create high purity water for the Paint shop and for Detroit Renewable Power (Waste to energy steam provider for our site)
United States of America	Cost savings Improved water efficiency	Alternate Sources of Water - At our assembly plant in Missouri, the Foundation Drainage (Artesian Well) that was pumped and discharged through the site's stormwater system is now captured and used for processes that off-set City Water requirements.	Current-up to 1 year	Water is used for paint sludge system and other processes saving 22 million gallons per year of city water.
Mexico	Improved community relations Social licence to operate	Use major recycle system up to Zero-Liquid-Discharge (ZLD) in water stressed regions	1-3 years	Silao complex in Mexico is undergoing engineering to increase wastewater recycling from 30% currently to 80% or more (ZLD is being considered).
Company-wide	Improved water efficiency	Dry Paint Overspray Systems being utilized in new paint shops	1-3 years	Eliminates the wet paint sludge systems which are large water users.

#### 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
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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
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**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
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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	Mexico	Other: Lerma Chapala	GM Silao Assembly	643.29	Lower	The plant continues conservation activities due to the stress on non-renewable wells.

**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	0	0	0	0	643.29	0	0	0	Non-renewable groundwater is withdrawn at this site since it is the only available water source in the area. The plant currently reuses about 40% of their water by treating it and reusing it back into the process

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
									and future plans are to expand the amount of water reuse and increase efficiency and conservation.

**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	425.3	Lower	The volume is estimated based on estimates from tank volumes and daily operations.

**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
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Facility reference number	Fresh surface water	Municipal/industrial wastewater treatment plant	Seawater	Groundwater	Wastewater for another organization	Comment
Facility 1	0	352.5	0		72.80	The volume is estimated based on estimates from tank volumes and daily operations.

### 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	643.29	Lower	Since the source of withdrawal is different than the discharge, the consumption is the same as withdrawal.

### 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	76-100	ISO 14064-3:2006 -- Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions. See attached file for GM's total water withdrawal verification statement from an independent third party.
Water withdrawals- volume by sources	76-100	There is only one source at Silao, non-renewable wells.
Water discharges- total volumes	Not verified	
Water discharges- volume by	Not verified	

Water aspect	% verification	What standard and methodology was used?
destination		
Water discharges- volume by treatment method	Not verified	
Water discharge quality data- quality by standard effluent parameters	Not verified	
Water consumption- total volume	Not verified	

#### Further Information

See the attached verification statement for GM's total water withdrawal.

#### Attachments

[https://www.cdp.net/sites/2016/64/7164/Water 2016/Shared Documents/Attachments/Water2016/W5.FacilityLevelWaterAccounting\(II\)/11102036Prodin-9-Verification Statement Water.pdf](https://www.cdp.net/sites/2016/64/7164/Water%202016/Shared%20Documents/Attachments/Water2016/W5.FacilityLevelWaterAccounting(II)/11102036Prodin-9-Verification%20Statement%20Water.pdf)

### 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
Board of individuals/Sub-set of the	Scheduled -	Water is measured and monitored on a monthly basis and is a Key Performance Indicator (KPI)

Highest level of direct responsibility for water issues	Frequency of briefings on water issues	Comment
Board or other committee appointed by the Board	monthly	and one of our metrics integrated into our business plan and reviewed monthly at the plant, regional, and global levels at the senior-management level.

**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
Establishment of sustainability goals	Water sustainability goals have been established since 2010 and extend to 2020 for a 15% intensity reduction target. We are currently ahead of our glide path at 10% reduction in 2015 from 2010.
Introduction of water management KPIs	Water is integrated into our Global Manufacturing System, GMS at the facility level. Water per unit is part of the plant level Environmental element within the Continuous Improvement section of our business plan deployment (BPD). Monthly targets are established, Water per unit is measured each month, and sufficiency plans developed to meet the goal using Plan, Do, Check, Act (PDCA) methodology.

**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
Increased capital expenditure	In areas that GM expands operations that are water stressed, we have invested additional capital for reuse and recycling. In one of our newest plants in Mexico, GM installed a zero liquid discharge facility. As part of our business plan to meet our water targets, we also evaluate business cases for water efficiency and spend additional monies to reduce water consumption. In Brazil, we installed water reuse in a new engine plant and reuse wastewater in an assembly plant for cooling tower make-up.

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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
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W6.3

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

Yes

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W6.3a

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

Content	Please explain why this content is included
Publicly available Company-wide Performance standards for direct operations Incorporated within group environmental, sustainability or EHS policy	Consistent with our environmental principles, GM has integrated water management into its business plan and developed a public goal for water intensity reduction of our direct operations.

**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
-11	-39	CAPEX decreased due to a major upgrade for an Assembly Plant wastewater treatment facility in 2014 that was completed. OPEX reduced due to natural cyclical spending in asset sustainment for water related assets.

**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

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**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
GM Rayong Thailand Assembly	Fine	high pH discharge	1	11143	USD(\$)	The incident was corrected and did not recur.
GM Rayong Thailand Engine	Fine	high sulfide discharge	1	2790	USD(\$)	The incident was corrected and did not recur.

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**W7.1b**

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

0.00%

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**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
0.00	No change

#### Further Information

#### Page: W8. Targets and Initiatives

#### W8.1

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

Yes, targets and goals

#### 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
Other: Reduction of water intensity	Water stewardship	Reduce Water intensity that Includes all manufacturing and non-manufacturing facility water withdrawal (municipal, surface, well), normalized by vehicle production by 15% from 2010 to 2020.	% reduction per unit of production	2010	2020	67%

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**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
Watershed remediation and habitat restoration, ecosystem preservation	Shared value	Improve wildlife habitats by having a Wildlife Habitat Certification (or equivalent) at each GM manufacturing site where feasible by 2020.	46 Wildlife habitats at GM locations

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**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

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**Further Information**

**Module: Linkages/Tradeoff**

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

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**W9.1**

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

Yes

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**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
Extreme water stressed areas require water reuse by treating wastewater to industrial water standards. This requires additional energy and increased greenhouse gas (GHG) emissions.	Trade-off	Increased GHG emissions must be balanced with the need for water reuse to ensure sustainability efforts in areas where growth is needed due to market demand. GHG emissions increases due to water reuse are small compared to total Company emissions.

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**Further Information**

**Module: Sign Off**

**Page: Sign Off**

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**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
Charles K. Stevens, III	Executive Vice President and Chief Financial Officer	Chief Financial Officer (CFO)

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**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.

Yes

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**Further Information**

**CDP 2016 Water 2016 Information Request**