General Motors Company - Water Security 2021

W0. Introduction

W0.1

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

General Motors Company ("GM") is a global company committed to delivering safer, better and more sustainable ways for people to get around. With global headquarters in Detroit, Michigan, GM employs 155,000 people in over 300 facilities across five continents.

GM offers a comprehensive range of vehicles and services in more than 84 countries around the world. We have manufacturing, assembly, distribution, office or warehousing operations in 29 countries, including equity interests in associated companies, which perform manufacturing, assembly or distribution operations. The largest national market for our products is China, followed by the U.S., Brazil, Canada and Mexico. Along with its strategic partners, GM produces cars and trucks, and sells and services these vehicles through the following brands: Chevrolet and Cadillac globally, and Baojun, Buick, GMC, Wuling, OnStar, and Cruise in certain regions or specific countries.

GM also maintains equity stakes in major joint ventures including SAIC-GM, SAIC-GM-Wuling, in China, and GM Korea, as well as subsidiaries such as OnStar, a recognized industry leader in vehicle safety, security, and information services, Cruise Automation, a leader in autonomous driving technology, and GM Financial, which offers Automotive financing services.

More information is available at www.gm.com and media.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, GM continually assesses and takes steps to reduce the environmental impact of its products and operations.

For example, GM is focusing on energy management; carbon and waste intensity reduction; resource preservation; and developing more efficient vehicles through our technological advances, global scale and employee innovation. These areas help the company reduce its environmental footprint and share best practices worldwide 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.

GM's Guiding Environmental Commitments are the foundation of this policy and were established from the core Environmental Principles and values that were in place for more than 25 years. GM's Guiding Environmental Commitments now serve as a guide for all GM employees worldwide. GM is a signatory to the United Nations Global Compact, which endorses a framework of principles in the areas of human rights, labor, the environment, and anti-corruption. In 2021, GM signed the UN Global Compact - CEO Water Mandate to support global water security.

GM's commitment supports the Global Compact's ten principles and the company's intent to maintain the principles and to evaluate related global best practices that may be applicable to GM. Of these ten principles, Environment is specifically tied to Principles 7, 8 and 9, which state: • UNGC Principle 7 – Businesses should support a precautionary approach to environmental challenges. • UNGC Principle 8 – Businesses should undertake initiatives to promote greater environmental responsibility. • UNGC Principle 9 – Businesses should encourage the development and diffusion of environmentally friendly technologies. GM's Guiding Environmental Commitments encourage environmental consciousness in both daily conduct and in the planning of future products and programs. We are dedicated to:

-Preventing deforestation, conserving water, caring for natural resources in and around our facilities and the communities where we operate.

-We believe climate change is real and are committed to the public disclosure of our greenhouse gas emissions and taking actions to reduce them.

-Renewable Energy We are committed to using renewable energy at our facilities and sites globally and will advocate for policies that promote renewable energy use and demand.

General Motors is reporting water security for operations where we have operational control for water use for owned and joint ventures as applicable. Our operations are managed regionally in North America, South America, and International Operations (rest of world) and will be reporting water security company wide, in our Supply Chain, and by site where applicable.

W0.2

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

	Start date	End date
Reporting year	January 1 2020	December 31 2020

W0.3

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

Argentina
Brazil
Canada
Chile
China
Colombia
Ecuador
Egypt
Italy
Mexico
Republic of Korea
United States of America

W0.4

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

USD

W0.5

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

Companies, entities or groups over which operational control is exercised

W0.6

(W0.6) Within this boundary, are there any geographies, facilities, water aspects, or other exclusions from your disclosure?

Yes

W0.6a

(W0.6a) Please report the exclusions.

Exclusion	Please explain
Small facilities with insignificant water use are excluded. Examples are remote offices with minimal water security issues and low water use of 1% of total.	GM has a robust utility management system operated by a third party globally with invoice verification and auto bill pay in some countries. Small facilities have minimal impact on cost and water security and are not included in the utility bill management system. Based on people counts at manufacturing and major non-manufacturing sites minus total employees of 155k results in about 30,600 people in remote offices. Using 32L/person/day, we estimate that these small offices represent 1% of our total withdrawal and are insignificant.

W1. Current state

W1.1

(W1.1) Rate the importance (current and future) of water quality and water quantity to the success of your business.

	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Vital	Important	Direct Use: Water use in our direct operations is used for pre-treatment of vehicle bodies prior to painting as well as weld cooling, machining, and powerhouse operations making it vital for our operations. We cannot manufacture vehicles without sufficient amounts of good quality freshwater. Also, our 155,000 employees rely on sufficient good quality water for drinking and sanitation purposes (WASH). Indirect use: Our supply chain manufactures automobile parts using raw materials that require significantly more water than our direct operations according to a life cycle analysis of auto parts in the supply chain. Painting operations at Tier 1 facilities require high quality water supply for welding operations and cooling water makeup, making availability extremely important. About 85% of water use in the supply chain is at tiers 2-6 with the majority needed for electric power generation, steel production, mining, and agriculture. Additionally, supply chain employees need safe water for drinking and sanitation. Future: Freshwater dependency for both will be similar and tied to future production requirements.
Sufficient amounts of recycled, brackish and/or produced water available for use	Not very important	Not very important	Brackish and produced water are not important to GM as they are not available near GM locations and the development would be extremely costly due to the high quality of water needed for GM WASH and product quality. Although externally recycled water is not very important to GM for the same reason as brackish water, internally recycled water is important to GM: Direct Use: Recycled water is used in our operations to reduce consumption in paint pre-treatment and cooling water and is important in our operations to reduce withdrawal. Additionally, in water stressed areas, we use recycled water for all manufacturing operations with Zero Liquid Discharge process, including paint pre-treatment of vehicle bodies since water supply is scarce and low quality. We do not source brackish or produced water. Indirect Use: Recycled cooling water is important to supply chain manufacturing of automobile parts for casting and welding as well as in electricity generation to reduce withdrawal of freshwater. Future: Recycled water dependency for both direct and indirect may increase in the future as more recycle water markets could develop and, with increasing scarcity, would result in an increased need for recycled water in direct and indirect operations.

W1.2

(W1.2) Across all your operations, what proportion of the following water aspects are regularly measured and monitored?

	% of sites/facilities/operations	Please explain
Water withdrawals – total volumes	100%	GM measures and monitors 100% of our major facilities water withdrawals using either invoices or meter data on a monthly basis. It is tracked in a global utility database and the data is verified by an independent third party annually. Some small facilities (offices) have water service included in their lease rate and we do not track the water withdrawal. Our estimate is that this represents less than 1% of our water withdrawal. As water management is integrated into our business plan, we set goals for each facility measured and track progress on a monthly scorecard at facility, region, and company level and report to senior management.
Water withdrawals – volumes by source	100%	GM measures and monitors 100% of our major facilities water withdrawals by source using either invoices or meter data on a monthly basis. It is tracked in a global utility database by source and the data is verified by an independent third party annually. Some small facilities (offices) have water service included in their lease rate and we do not track the water withdrawal. Our estimate is that this represents less than 1% of our water withdrawal by source, so we measure and monitor 99% of water withdrawal by source.
Entrained water associated with your metals & mining sector activities - total volumes [only metals and mining sector]	<Not Applicable>	<Not Applicable>
Produced water associated with your oil & gas sector activities - total volumes [only oil and gas sector]	<Not Applicable>	<Not Applicable>
Water withdrawals quality	100%	GM measures and monitors 100% of our major facilities water withdrawal quality either from supplier provided test results or our own lab testing on a monthly basis or more frequently as required by local regulations. Some small facilities (offices) have water service included in their lease rate and we request water quality from the supplier. Our estimate is that this represents less than 1% of our water discharge quality.
Water discharges – total volumes	100%	GM measures and monitors 100% of our major facilities water discharges using either invoices, meter data, or engineering estimates on a monthly basis. It is tracked in a global environmental database on a monthly basis. Some small facilities (offices) have water service, including discharge included in their lease rate and we do not track the water discharged. Our estimate is that this represents less than 1% of our water discharge.
Water discharges – volumes by destination	100%	GM measures and monitors 100% of our major facilities water discharges by destination using either invoices, meter data, or engineering estimates on a monthly basis. It is tracked in a global environmental database on a monthly basis. Some small facilities (offices) have water service, including discharge included in their lease rate and we do not track the water discharged. Our estimate is that this represents less than 1% of our water discharge.
Water discharges – volumes by treatment method	100%	GM measures and monitors 100% of our major facilities water discharges by treatment method using either invoices, meter data, or engineering estimates on a monthly basis. It is tracked in a global environmental database on a monthly basis. Some small facilities (offices) have water service, including discharge by treatment method included in their lease rate and we do not track the water discharged by treatment method. Our estimate is that this represents less than 1% of our water discharge by treatment method,
Water discharge quality – by standard effluent parameters	100%	GM measures and monitors 100% of our major facilities water discharges by quality data from lab results on a monthly basis where required by regulatory agencies. It is tracked in a global environmental database on a monthly basis. Some small facilities (offices) have water service, including discharge that are included in their lease rate and we do not track the water quality data. Our estimate is that this represents less than 1% of our water discharge by quality data by standard effluent parameters.
Water discharge quality – temperature	1-25	At facilities where discharge temperature is regulated, and the possibility exists for high discharge temperatures, GM measures 100% of the discharge temperature on a monthly basis. We estimate that about 2% our facilities have temperature monitoring included in their process data management parameters and the remainder are not applicable. We do not monitor temperatures where there is no possibility of elevated temperatures as is the normal case for our most of our operations.
Water consumption – total volume	100%	Water Consumption is calculated from withdrawal by source and discharge by source data for 100% of our major facilities. We monitor it on an annual basis as our focus for water security is on withdrawal. Some small facilities (offices) have water service, including discharge that are included in their lease rate and we do not track the water withdrawal or discharge data. Our estimate is that small facilities represents less than 1% of our water consumption - total volume.
Water recycled/reused	1-25	At GM facilities where water is reused or recycled as part of the major supply, e.g. Zero-liquid discharge, we monitor the volume of recycled water. Where we recycle at a local process, e.g. phosphate tank in paint shop, metering is not always used as the volume is not an important parameter, just that we reuse 100% of water from the stage that has higher quality vs. lower quality. We estimate that about 2% of our facilities measure reuse or recycle water on a monthly basis.
The provision of fully-functioning, safely managed WASH services to all workers	100%	100% of our facilities provide clean water for drinking, sanitation, cooking and cleaning purposes to our 155,000 employees at over 300 facilities globally to the best of our knowledge. WASH is monitored on a monthly basis using water quality information to verify that clean water supply is provided to employees. GM has policies and procedures for WASH at all of our global facilities.

W1.2b

(W1.2b) What are the total volumes of water withdrawn, discharged, and consumed across all your operations, and how do these volumes compare to the previous reporting year?

	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Total withdrawals	25554	Much lower	Due to the work stoppages in 2020, many facilities were temporarily shut down. Water use reduced by 23% from 2019, vehicle volumes reduced by 16% from 2019, and many offices were shut down from mid-March for the entire year. We currently expect withdrawal to increase with increased production based on early 2021 forecasts.
Total discharges	25048	Lower	Due to work stoppages in 2020 many facilities were shut down and water discharge reduced by 23% from 2019. Vehicle volumes reduced by 16% and many offices were shut down from mid March for the entire year. We expect 2021 discharges to increase with increased production based on early 2021 forecasts.
Total consumption	7666	Much lower	Vehicle production volume was 16% lower in 2020 vs. 2019 and water efficiency and conservation resulted in 23% lower withdrawal and consumption. We expect an increase in consumption for 2021 as a result of increased production based on early 2021 forecasts. Consumption is calculated using measured and engineering calculations from water balances conducted at various assembly plants and applied to all of GM's water consumption. Using the standard formula of Withdrawal minus Discharge is misleading for consumption due to the large amount of groundwater infiltration into water discharge meter data. Some years we would have shown negative consumption, which is not an accurate representation of consumption. This year the simple calculation of withdrawal minus discharge shows only 506 ML consumption; whereas, our estimate is over 15 times higher and more realistic. We expect 2021 consumption to increase with increased production based on early 2021 forecasts.

W1.2d

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

	Withdrawals are from areas with water stress	% withdrawn from areas with water stress	Comparison with previous reporting year	Identification tool	Please explain
Row 1	Yes	1-10	Lower	WRI Aqueduct	The majority of GM's operations water withdrawal (70%) is in our 40 vehicle assembly plants. GM used global water withdrawal data and location coordinates from 40 global assembly plants to assess water stress using the WRI Aqueduct model. Both WRI Aqueduct and local knowledge identified 2 GM Assembly plant sites in China (Qingdao and Dongyue) and 3 GM facilities in Mexico (San Luis Potosi, Silao, and Ramos Arizpe) as extremely high (>80%) water stressed. Lower vehicle volumes due to pandemic in 2020 compared to 2019, efficiency, and, conservation provided lower water use at these (5) water stressed areas. Based on early 2021 forecasts, we expect an increase in 2021 consumption.

W1.2h

(W1.2h) Provide total water withdrawal data by source.

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water, including rainwater, water from wetlands, rivers, and lakes	Not relevant	<Not Applicable>	<Not Applicable>	GM facilities have minimal withdrawal of rainwater, water from wetlands, rivers, and lakes due to GM's Assembly plant locations not being in close proximity to these sources. Additionally, GM Assembly plant paint shops require high quality water and treatment costs are excessive for surface water use. Due to proximity and quality issues, we do not expect this source to be relevant in the future.
Brackish surface water/Seawater	Not relevant	<Not Applicable>	<Not Applicable>	We have no sites near sources of Brackish/seawater. Additionally, GM Assembly plant paint shops require high quality water and treatment costs are excessive for brackish/sea water use. Due to proximity and quality issues, we do not expect this source to be relevant in the future.
Groundwater – renewable	Relevant	757	Much lower	Groundwater water - renewable is relevant based on GM manufacturing plant locations that can provide significant cost savings for groundwater-renewable compared to potentially more expensive third party supplied water. Groundwater-renewable use was 25% lower in 2020 vs. 2019 due to reduced production volume and water efficiency and conservation resulted in lower withdrawal. We expect an increase use in the future based on forecasted increased production volume partially offset with water conservation.
Groundwater – non-renewable	Relevant	1815	Much lower	Groundwater water - non-renewable is relevant based on GM manufacturing plant locations that can provide significant cost savings for groundwater-non-renewable compared to potentially more expensive third party supplied water. Groundwater-non-renewable use was 15% lower in 2020 vs. 2019 due to reduced production volume as a result of pandemic shutdowns, offset by water efficiency and conservation which resulted in much lower withdrawals. We expect an increase use in the future based on forecasted increased production volume partially offset with water conservation.
Produced/Entrained water	Not relevant	<Not Applicable>	<Not Applicable>	GM facility locations are not in close proximity to sources of Produced/Entrained water. Additionally, GM Assembly plant paint shops require high quality water and treatment costs are excessive for Produced/Entrained water use. Due to proximity and quality issues, we do not expect this source to be relevant in the future.
Third party sources	Relevant	22982	Much lower	Third party water sources are relevant to GM based on GM manufacturing plant locations being near third party sources that can provide significant cost savings compared to other sources. In many instances, third party sources have higher quality levels providing cost savings for reduced pre-treatment costs. Third party water source use was 23% lower in 2020 vs. 2019 due to reduced production volume, water efficiency, and conservation which resulted in lower withdrawal. We expect an increased use in the future based on increased production volume that will be offset with water conservation.

W1.2i

(W1.2i) Provide total water discharge data by destination.

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water	Relevant	11410	Lower	Fresh water discharge is relevant to GM based on some manufacturing plant locations with no third party sewer nearby that can provide significant cost savings for Surface water discharge compared to potentially more expensive third-party discharge options. Fresh Water discharge was lower in 2020 vs. 2019 due to reduced production volume, assuming similar groundwater infiltration, and water efficiency and conservation as in previous year. We expect an increase in discharge in the future based on increased production volume offset with water conservation.
Brackish surface water/seawater	Not relevant	<Not Applicable>	<Not Applicable>	We have no sites in close proximity of Brackish/sea water for the possibility to discharge as a cost effective method. Additionally, treatment costs are excessive for discharges to brackish/seawater use. Due to proximity and pre-treatment costs, we do not expect this source to be relevant in the future.
Groundwater	Relevant	97	Much lower	Groundwater discharge is relevant to GM based on some GM Manufacturing plant locations with water reuse that require solar ponds to treat / dry the effluent that has high salt content. Solar ponds or Groundwater discharge can provide significant cost savings, less discharge risk, and less energy use compared to potentially more expensive discharge treatment options. Groundwater discharge was 30% lower in 2020 vs. 2019 due to lower production volume in the region offset by water efficiency and conservation, that resulted in lower discharge. We expect increased discharge in the future based on increased production volume offset with water conservation.
Third-party destinations	Relevant	13550	Lower	Third party discharge is relevant to GM based on the majority of GM manufacturing plant locations being in close proximity to 3rd party sewer nearby that can provide significant cost savings compared to potentially more expensive Surface Water or other discharge options. Third Party discharge was lower in 2020 vs. 2019 due to the combination of reduced production volume, ground water infiltration, and water efficiency and conservation. We expect an increase discharge to third party destinations in the future based on increased production volume, offset with water conservation.

W1.2j

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

	Relevance of treatment level to discharge	Volume (megaliters/year)	Comparison of treated volume with previous reporting year	% of your sites/facilities/operations this volume applies to	Please explain
Tertiary treatment	Relevant	97	Much lower	11-20	Tertiary treatment is important to GM at sites where we reuse wastewater as process water to reduce impact on non-renewable well withdrawal. As the water reuse is zero liquid discharge, the only water that is discharged is due to evaporation.
Secondary treatment	Relevant	11410	Lower	21-30	Secondary treatment is important to GM for our facilities that have manufacturing operations and need to discharge directly to surface water to meet regulatory levels. Direct discharge provides GM a cost savings alternative to third party discharge.
Primary treatment only	Relevant	16550	Lower	51-60	Primary treatment is important to GM since the majority of our facilities are near third party wastewater sites (Publicly Owned Treatment) and provide capital cost savings to alternate methods.
Discharge to the natural environment without treatment	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	GM does not have any facilities that could discharge water to the natural environment without treatment. Even our storm water discharge from facilities requires oil removal treatment due to parking lot storm runoff.
Discharge to a third party without treatment	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	GM has offices and other non-manufacturing locations that discharge domestic sewage directly to third parties without pre-treatment. Based on people counts at manufacturing and major manufacturing facilities, we estimate that these unmetered discharges represent 2% of our discharge and are not relevant to our water balance.
Other	Please select	<Not Applicable>	<Not Applicable>	<Not Applicable>	

W1.4

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

Yes, our suppliers

Yes, our customers or other value chain partners

W1.4a

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

Row 1

% of suppliers by number
1-25

% of total procurement spend
76-100

Rationale for this coverage
In order to build the most valuable automotive company, we must recognize that our impacts go beyond the walls of GM to include suppliers. - Water consumption in our supply chain (SC) is important to understand the magnitude and at which tier and industry that consumption occurs so we can develop a long term reduction plan. - Water intensity is 20 times greater in SC and 87% is outside of tier one in steel and agriculture industries. -We selected a combination of high life cycle analysis (LCA) water users and largest spend group (90%) to focus on Water security in SC engaging with CDP Water SC. The large impact group is comprised of strategic suppliers with the majority of spend and based on an LCA we also included the top users that were not included in top spend. High consumption from the LCA and spend provided a list of 330 suppliers asked to respond to CDP SC. GM set a new goal of 100 % of targeted GM suppliers reporting data to CDP SC by 2022 to incentivize the SC for participation in CDP Supply chain and engagement in water security.

Impact of the engagement and measures of success
GM gathers CDP Supply Chain (SC) information to measure continuous improvement of our suppliers and identify any significant risks & opportunities. GM engages our SC in water related areas collaboratively through AIAG & CSR Europe to provide practical guidance on water quality and consumption in a joint Sustainability guidance statement. GM, AIAG, and CSR Europe emphasized the importance of water security. This guidance extends to 18,000 GM suppliers in the industry. Also, GM is a member of CDP SC - Water & sent requests to 330 suppliers to respond. CDP SC data helps us calibrate our LCA data. Our measure of success is continuous improvement to key performance indicators: KPI improvement in GM supply chain increased significantly in 2020 vs, 2019 in these areas: Disclosure to GM (81%/61%); Water accounting showed increase in suppliers' response with (2020 number of suppliers/2019) (297/275); similarly Suppliers with Targets showed a 78% increase in numbers of suppliers (260/146); and those disclosing Risk assessment increased with (231/134). GM believes that awareness drives success with 82% of suppliers reporting active targets and/or goals, 95% are accounting for withdrawal, & 9% of our suppliers suggested collaborative opportunities.

Comment
Overall 2020 GM suppliers that responded showed continuous improvement in all KPIs. GM believes that awareness drives success and with 82% supplier reporting targets, 95% are accounting for withdrawal metrics, and 9% of our suppliers suggested collaborative opportunities. An LCA is performed using EPA environmental economic input output model to determine the magnitude of GM's supply chain water footprint. Additionally, CDP SC Water response data also helps us calibrate LCA data.

W1.4b

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

Type of engagement
Incentivizing for improved water management and stewardship

Details of engagement
Demonstrable progress against water-related targets is incentivized in your supplier relationship management

% of suppliers by number
1-25

% of total procurement spend
76-100

Rationale for the coverage of your engagement
GM understands that water security in our supply chain is an auto industry wide issue, common to all auto suppliers. GM is member of Automotive Industry Action Group (AIAG) with over 2000 members. AIAG is also collaborating with CSR Europe, which is the leading European business network for Corporate Social Responsibility with a network of corporate members and National CSR Organisations reaching over 10,000 companies. GM engages the members of AIAG and CSR Europe supply chain in water related areas collaboratively with a joint Sustainability guidance statement. The guidance is related to ESG with specific language regarding water guidance related to UN Sustainability Development Goals "SDG" 6 - " Companies are expected to effectively reduce, reuse, and recycle water with responsible treatment of wastewater discharges to protect the environment and improve overall water quality" Also, the guide contains practical guidance on water security, quality, and consumption. Additionally, GM engaged 289 suppliers in CDP SC.

Impact of the engagement and measures of success
The benefit of a joint guidance document, signed by GM and 13 Auto OEMs, is a clear and common message to all auto suppliers regarding our expectations for their actions related to water security and other ESG issues. One of the continuous improvements was the combining of separate AIAG and CSR Europe guides into one harmonized guide for suppliers. This provided a common message to suppliers from many customers incentivizes them to comply, resulting in improved water security. We believe that engaging suppliers in water security will incentivize them to improve. Our direct measurement on engagement in water security with our supply chain is through CDP Supply Chain. Our measure of success is continuous improvement to key performance indicators: KPI improvement in GM supply chain increased significantly in 2020 vs, 2019 in these areas: Disclosure to GM (81%/61%); Water accounting showed increase in suppliers' response with (2020 number of suppliers/2019) (297/275); similarly Suppliers with Targets showed a 78% increase in numbers of suppliers (260/146); and those disclosing Risk assessment increased with (231/134). GM believes that awareness drives success with 82% of suppliers reporting active targets and/or goals, 95% are accounting for withdrawal, & 9% of our suppliers suggested collaborative opportunities.

Comment
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W1.4c

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

We are committed to responsibly using water while taking actions that preserve water quality and conservation across our operations, in our supply chain and in the communities in which we operate. Engaging with students in local communities promotes learning about water quality for future generations. As water stress is a local issue that affects both GM and the communities where we operate, many employees volunteer with their site's local watershed. A watershed is defined as an area of land that drains rainwater or snow into one location, such as a stream, lake, or wetland. Our watersheds supply our drinking water, and water for farming, manufacturing, and recreation. For example, employees in Flint and Grand Blanc Michigan are located within the Flint River watershed, and they make sure that their watershed stays pure by participating in river clean-up events and storm drain stenciling so that folks know where their neighborhood drains go. GM also participates in the Flint River GREEN program and Eco-Green with mentoring local students and assisting with monitoring rivers to assess water quality and promote STEM education. Engaging the local communities, including future potential GM customers in awareness, education, and action provides for positive impact on local communities and goodwill for GM. Here's a quote from a student that is active in Eco-Green- "I could see myself doing this for the rest of my life," says 7th grader Alicia Mendez, as she bends down to ID a bug near the river. She's a "stream leader," in her class at the Butcher Educational Center and with the General Motors sponsored program, the Clinton River Watershed Council Stream Leaders program. Engaging with young, future customers and their parents in water conservation provides a positive brand image for GM products. The Flint River GREEN annual report for 2020 showed an increase in Pre to Post scores from 23% to 60% indicating success of the program.

W2. Business impacts

W2.1

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

Yes

W2.1a

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

Country/Area & River basin

Mexico	Panuco

Type of impact driver & Primary impact driver

Technology	Transition to water efficient and low water intensity technologies and products

Primary impact

Upfront costs to adopt/deploy new practices and processes

Description of impact

Increases in the frequency of drought conditions can further depress water availability for production in water-stressed areas. GM has production facilities in Mexico at Silao Assembly, San Luis Potosi Assembly, and Ramos Arizpe Assembly, an area that was hit hard by drought in recent years, and there is a risk that increases in the frequency of such events could temporarily disrupt production due to lack of water availability. We developed a risk mitigation plan, which was accomplished by Zero Liquid Discharge equipment costing $12M USD with annual operating cost of $200k.

Primary response

Adopt water efficiency, water reuse, recycling and conservation practices

Total financial impact

12200000

Description of response

GM integrated water management into its annual business planning process and set targets for each facility to reduce water use intensity by 35% by 2035. Reduction methods are implemented at a facility level and include conservation with behavioral activities, improving equipment efficiency, and reuse. When plants are located in water-stressed areas, special consideration is given to water treatment technologies. A Zero Liquid Discharge (ZLD) system was installed at our San Luis Potosi, Mexico facility that produces vehicles and transmissions and is being operated to reuse water in the process, reduce withdrawal from deep wells, and reduce the risk of lack of water for production while providing an opportunity to continue production without interruption. The installed capital expenditure cost for Zero Liquid Discharge equipment was $12M USD and ongoing operations cost of $200k.

W2.2

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

No

W3. Procedures

W3.3

(W3.3) Does your organization undertake a water-related risk assessment?
Yes, water-related risks are assessed

W3.3a

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

Direct operations

Coverage
Full

Risk assessment procedure
Water risks are assessed as part of an enterprise risk management framework

Frequency of assessment
More than once a year

How far into the future are risks considered?
More than 6 years

Type of tools and methods used
Tools on the market
Enterprise Risk Management
Databases

Tools and methods used
WRI Aqueduct
Other, please specify (Local internal GM knowledge methods)

Comment
Using water risk evaluation tool - WRI Aqueduct shows baseline water stress and forecasts out to 2030 providing a comparison of risks in 2020 to those in 2030. Comparing future growth in our 6-year business plan, shows that the risks are getting worse in the water stressed areas in Mexico and China. Based on our current mitigation plan, future manufacturing planning will incorporate additional measures related to water efficiency and conservation. We use similar activities for our supply chain using life cycle analysis for the high water-users. The results of Aqueduct model are compared to local intern GM knowledge methods to calibrate the model.

Supply chain

Coverage
Full

Risk assessment procedure
Water risks are assessed as part of an enterprise risk management framework

Frequency of assessment
Annually

How far into the future are risks considered?
More than 6 years

Type of tools and methods used
Tools on the market
Enterprise Risk Management
Other

Tools and methods used
WRI Aqueduct
Other, please specify (Internal Company Methods, Life Cycle Analysis (LCA) of water consumption using environmental economic input output analysis by a third-party for our entire supply chain of 13,500 suppliers.)

Comment
GM conducts a life cycle analysis on all of our auto parts from 13,500 suppliers for water consumption which is included in an evaluation using Aqueduct model to determine areas of extreme risk for water security. We analyzed over 50 top water users in the supply chain operating in Mexico, Brazil, and South Korea and found 14 in High Overall Water Stress areas (>80%) that were all in Mexico, except one in California, US. We used the risk analysis maps to forecast stress in 2030 and as most suppliers are located near GM facilities in Mexico, it indicates a worsening of stress in Mexico and mitigation of risk required now and, in the future, as important for water security. As we have not been aware of any supplier disruptions due to water stress, the assumption is that suppliers are mitigating similar to GM in extreme water stress areas.

Other stages of the value chain

Coverage
None

Risk assessment procedure
<Not Applicable>

Frequency of assessment
<Not Applicable>

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

Type of tools and methods used
<Not Applicable>

Tools and methods used
<Not Applicable>

Comment
We are committed to responsibly using water while taking actions that preserve water quality and conservation across our operations, in our supply chain and in the communities in which we operate. GM committed to reduce the water intensity of its operation by 35% by 2035 with a baseline of 2010. The commitment beyond 2020 is to continue this aggressive initiative as a response to the current water related risks of water scarcity, greater pollution and climate change. As water stress is a local issue that affects both GM and the communities where we operate, many employees volunteer with their site's local watershed. A watershed is defined as an area of land that drains rainwater or snow into one location, such as a stream, lake, or wetland. Our watersheds supply our drinking water, and water for farming, manufacturing, and recreation. For example, employees in Flint and Grand Blanc Michigan, US are located within the Flint River watershed, and they work to improve their watershed improves by participating in river clean-up events and storm drain stencilling so that folks know where their neighborhood drains go. They also participate in the Flint River GREEN program, mentoring local students and assisting with monitoring rivers to assess water quality and promote STEM education. Engaging the local communities, including future potential GM customers in awareness, education, and action provides for positive impact on local communities and goodwill for GM.

W3.3b

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

	Relevance & inclusion	Please explain
Water availability at a basin/catchment level	Relevant, always included	Water availability at river basin level is important to our operations in locations where the water supply to our manufacturing facilities could be affected due to potential shortfall of available water for operations. Local water availability assessment is a local management responsibility. Each GM manufacturing site has a site utility manager (SUM) that provides internal company methods to monitor water supply availability and water quality of supply and discharge water to provide risk management analysis and mitigation. SUM regularly reviews sampling reports from water utility companies and discusses water availability. An example of this process in action was at our Assembly plant in Adelaide, Australia. The SUM was notified by the local utility that due to drought conditions the local aquifer could experience stress. The plant increased water conservation and began planning a contingency plan. Fortunately, the drought ended, and the contingency plan did not have to be implemented which would have resulted in considerable cost.
Water quality at a basin/catchment level	Relevant, always included	Water quality at river basin level is important to our operations in locations where the water supply to our manufacturing facilities could be affected due to employee water sanitation and hygiene (WASH) requirements and product quality. Local water quality assessment requires local management. Each GM manufacturing site has an Environmental leader that provides internal company methods, such as regular monitoring of water quality and to provide risk management analysis and mitigation as needed. The Environmental Leader regularly reviews sampling reports from water utility companies to ensure compliance with safe drinking standards. Each facility has a 3rd party Chemical Manager that looks at water quality for each critical process. An example of this process is at our Arlington Texas assembly plant where the city declared a boil water alert that would have shut down operations, the plant responded with sufficient bottle drinking water and rented portable wash stations to keep employees safe and continue production.
Stakeholder conflicts concerning water resources at a basin/catchment level	Relevant, always included	Stakeholder conflicts at river basin level are important to our operations in locations where the water supply to our manufacturing facilities could be affected due to potential shortfall of available water for operations. Management of site conflicts requires local management actions. Each GM manufacturing site has a site utility manager (SUM) and an environmental engineer (EE) who provide internal company methods to monitor and resolve conflicts of water resources at a local level. These local resources monitor local external stakeholder conflicts with community residents, non-governmental organizations, and other stakeholders involving water resources using newswires and monitoring social media. An example of this process is at our Arlington Texas assembly plant where the city declared a boil water alert that would have shut down operations, the plant responded with sufficient bottle drinking water and rented portable wash stations to keep employees safe and continue production. Water resource scarcity is also part of GM's Business Continuity Planning process that includes a "Peril" list identifying water risks. Stakeholder conflicts can cause physical risks, but likely are a reputational risk that GM wants to mitigate.
Implications of water on your key commodities/raw materials	Relevant, always included	Water issues are important to our operations as the quality of our products could be affected if water in sufficient quantities and of sufficient quality is not available due to high quality requirements in our painting operations. GM conducted water life cycle analysis and risk modelling using WRI models at a part and supplier level for auto components suppliers so that we could identify the major users of water and quantify current and future risk implications in our supply chain. GM uses LCA and risk models to quantify water risk in the supply chain for commodities and raw materials. We recently began using a supply chain visibility and mapping tool that provides a visualization of GM's entire footprint, including our own facilities, our Tier I suppliers, and many of our Tier II suppliers. Using this map as a base and internal company methods we can get answers to questions about supply chain risk by superimposing information like geopolitical events, hurricanes, water scarcity and other possible disruptions. With more than 200 incidents disrupting our supply chain every year, from earthquakes and floods to civil unrest and regulatory actions, robust tracking and visibility tools are essential to GM's operations.
Water-related regulatory frameworks	Relevant, always included	Water-related regulatory frameworks are important to our operations in locations where the water supply or quality for our manufacturing facilities could be affected due to WASH, production requirements, cost, or product quality. Local regulatory frameworks and tariff assessment are a GM local management responsibility to assess and mitigate. Each GM manufacturing site has an environmental engineer (EE) and a site utility manager (SUM) who provide internal company methods to monitor current regulatory frameworks and tariffs to provide risk management. Through monthly monitoring of water invoices, the SUM identifies changes in tariffs and requests to be informed about future changes by local municipalities. The EE monitors regulatory news feeds to identify any current or future changes to regulations. An example of this is at GM Detroit Assembly plant where the storm water tariff increased to such a degree that a water reuse project became financially viable and was implemented to drastically reduce storm water discharges at the site. In this case the risk was financial as stormwater discharge fees became a significant budget issue compared to previous year's cost.
Status of ecosystems and habitats	Relevant, always included	The status of ecosystems is important to our operations in all locations because of our Environmental principles which are implemented at every GM facility and especially at locations with certified wildlife habitats that could be adversely impacted. Local potential future changes in the status of ecosystems and habitats requires local management actions. Each GM manufacturing site has an environmental engineer (EE) who provides internal company methods to monitor future potential changes in wildlife habitats to assist in risk management. GM applied the WRI Aqueduct tool to all of our major manufacturing facility locations which projects risk now and in the future to 2030.
Access to fully-functioning, safely managed WASH services for all employees	Relevant, always included	Access to WASH services for all employees is important to our operations. GM has a policy of providing WASH to all employees. Each GM manufacturing site has a site utility manager (SUM) and an environmental engineer (EE) who provide internal company methods to monitor and manage WASH services for all employees. As water for personal use as well as production is essential to our facility operations, our global facilities teams plans for sufficient water for building occupants. The SUM regularly reviews sampling reports from water utility companies and discusses water availability with local authorities and may result in mitigating actions. The EE receives water quality reports from the utility provider or has well water sampled to ensure safe drinking water quality. An example of this is at GM's San Luis Potosi Assembly and Transmission plant in Mexico where a Zero Liquid Discharge water system was installed at additional cost to ensure adequate supply of water for the industrial process and for the building occupants for WASH. This system is continuously operated and is monitored on a regular basis.
Other contextual issues, please specify	Please select	

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

	Relevance & inclusion	Please explain
Customers	Relevant, always included	The linkage of a GM customer's fuel or electric supply to water security is a water-related risk that can affect GM vehicle sales. Fuel and/or electric supply is critical to our customers in order to operate the vehicles they purchase from GM. Water is a key component in fuel production, for either gasoline or ethanol, and to generate electricity from fossil fuels, as well as for some renewable electric energy sources. Water in the life cycle of the use phase of GM automobiles is an order of magnitude more intensive than our own manufacturing use or 22% of our total water footprint. Based upon our annual production in 2020, the majority of water use in the use phase is for fuel production for use in GM vehicles. Achievement of GM's climate change public goals to reduce vehicle emissions by improving fuel economy will help to reduce the water consumption in the vehicle use phase. Chevrolet uses customer engagement as a method to engage customers and provide information to customers specifically on Fuel Economy. Chevrolet maintains a website that describes the fuel economy features of GM vehicles like the Bolt EV with "Regen on demand" braking, "One-pedal driving", and "Energy Usage Score" provided on the touch screen display - https://www.chevrolet.com/fuel-economy. Also Chevrolet provides tips on how to save fuel with 14 vehicle operating actions that customers can take to save fuel, reduce cost, and help the environment. The life cycle analysis included all 7 Million customers' use of vehicles, with fuel production and car washing being the major water consumption for customers. The majority of customers have not experienced water risk yet, except for those in extremely water stressed areas, like Nairobi City, Kenya where extreme water stress resulted in customers experiencing closure of car wash facilities in recent years.
Employees	Relevant, always included	Employees are essential to our risk assessment as we rely on them to plan and implement our business plan. 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. Employees are engaged at each major facility that has a site utility manager (SUM) dedicated to water management and team members that are engaged in the planning process including water conservation measures on business plans, and associated goals, objectives, metrics, and countermeasures if the target is not achieved. On a monthly basis, GM reports performance to water target (M3/Vehicle) which is reviewed at each site globally to ensure that the goal is met and if not then countermeasures are developed to meet the goal. Also, GM conducts employee engagement activities, such as "Treasure hunts" at our facilities to help train employees about how they can identify energy and water efficiency opportunities and implement them.
Investors	Relevant, always included	Many of GM's institutional investors are CDP members, and they request GM to participate in CDP Water response indicating they are important stakeholders. GM uses the CDP Water report to inform investors and others on our water stress, management practices, and performance. The assessment includes life cycle analysis of water use in direct and indirect operations coupled with WRI Aqueduct assessment of current and future risks. Risks are presented in CDP Water report to inform investors and the public. GM made public our CDP Water report in 2020 to inform our investors and the public of our actions related to water security activities. Additionally, GM's annual 2020 Corporate Sustainability Report (page 108) informs investors and others about water security. We also have signed the CEO Water Mandate—a UN Global Compact Initiative—joining other global business leaders to address key challenges around water security and further aligning to the UN Sustainable Development Goals. An example, of water risk assessment disclosed in the CDP Water and CSR is reusing storm water for process water at the Detroit Factory ZERO plant, formerly GM Detroit Hamtramck Assembly plant. The savings equated to nearly $2 million per year for GM. The savings also benefited the City of Detroit. By creating an oversized pond to collect storm water, we reduced the storm water discharge to the Detroit River which experiences stress during storms as the City's sewer system is a combined sanitary and storm system.
Local communities	Relevant, always included	Since we share the water sources with our local communities, they are always included as stakeholders. Water risk assessments at a facility level are performed using life cycle analysis in direct and indirect operations coupled with the WRI Aqueduct assessment of current and future risks. Local communities are considered in the risk based on water availability in the WRI Aqueduct model coupled with local company methods. We have developed long-standing partnerships 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 26th year. GM mentors over 17,000 students annually. GM employees use engagement with local schools to inform communities about water risk in local rivers and tributaries using hands-on education, including water sampling. A potential risk was identified at our San Luis Potosi Assembly and Transmission facility in Mexico. The local community shared the deep well non-renewable aquifer with the plant, and based on water scarcity risk, GM installed Zero Liquid Discharge equipment and operates it to reuse water and greatly reduce withdrawal providing more water supply for the local community.
NGOs	Relevant, always included	NGOs provide feedback about GM's water management making them an important external stakeholder. The assessment includes life cycle analysis of water use in direct and indirect operations coupled with WRI Aqueduct assessment of current and future risks. Risks are presented in the CDP Water report to NGOs and the public. GM uses CDP Water Report to inform NGOs about our water stress, management practices, and performance. We partner with groups like WRI on water-related issues to ensure our engagement meets NGO expectations. We also have signed the CEO Water Mandate—a UN Global Compact Initiative—joining other global business leaders to address key challenges around water security and further aligning to the UN Sustainable Development Goals. As an example, GM partnered with WRI and Dow to conduct a water risk workshop for internal and external stakeholders. Including NGOs in the workshop provided external stakeholder input and collaboration, this also reduces GM's reputational risk as NGOs were involved in the process.
Other water users at a basin/catchment level	Relevant, always included	Since GM shares water sources with other commercial users, GM participates with community groups at a local level including other users as stakeholders to better understand water supply, quality, and risks for direct operations at the local level. The assessment uses internal company methods with environmental leaders (EL) at sites in conjunction with the assistance of subject matter experts (SME) at the company level. Risks are identified based on current and potential future issues that arise with other users in basins. An example is where GM is working with Michigan Manufacturers Association (MMA) along with other commercial water dischargers to Michigan basins on a collaborative effort to engage with regulators on methods to enhance water quality in the state. GM engages with MMA and other users in regular monthly meetings that include regulators to better understand current developments in pending legislation so that potential dischargers can be prepared for future regulations. GM is actively participating with MMA in monthly discussions along with other water users and regulators.
Regulators	Relevant, always included	Regulatory frameworks provide the operating guidance for water supply and discharge operations that are critical to our business continuity for our operations. Regulatory risk for water withdrawal and water discharge is determined using life cycle analysis GM has a team of environmental engineers at GM's central office , in the GM group "Sustainable Workplaces" (SW), and an environmental engineer (EE) at each major facility focused on Environmental compliance and sustainability who engage with regulators at the local, state, and federal levels. The EE has regular contact with regulators about compliance matters and upcoming regulations. Regulators are a key stakeholder as they drive compliance requirements for our facilities. SW engineers and the EE regularly interact with local, state and federal regulators on water quality issues at GM's facilities globally. The engagement is usually on an ad-hoc basis and depends on current or pending regulations related to water supply or quality. An example of risk assessment and mitigation was the pro-active water reuse project at our Detroit Factory ZERO plant, formerly, Detroit Hamtramck Assembly, that was identified by the local plant working with regulators at the local water utility. The SUM identified a cost issue with water discharge and worked with regulators to find a solution. In the end GM spent funds to build a stormwater reuse system to reduce the impact to the City of Detroit and in turn GM received a green tariff for stormwater discharge for a positive business case.
River basin management authorities	Relevant, always included	River basin management is critical to the business continuity of our operations related to water supply and discharge. GM has a team of engineers at GM's central office, "Sustainable Workplaces" team (SW), and an environmental engineer (EE) at each major facility focused on Environmental compliance and sustainability and a site utility manager (SUM) focused on water management. Local company methods by SUM and EE using input from newswire feeds, information from River basin authorities, and regular meetings and communications with river basin managers are used in the risk assessment. River basin authorities are a key stakeholder as they drive compliance requirements and economic rates for water use and discharge at some of our facilities as applicable. GM engages with River basin management authorities at the local level through regular communications and meetings as needed with the EE and the SUM leading the effort. As an example, GM negotiated with the City of Detroit Water and Sewer department to develop a green tariff that GM uses for storm water discharge based on our storm water reuse project at Detroit Factory ZERO, formerly Detroit Hamtramck Assembly plant that significantly reduced GM's cost and reduced the volume of water discharged to the Detroit River for an environmental benefit.
Statutory special interest groups at a local level	Relevant, always included	Statutory special interest groups at a local level could influence regulatory and water basin management which could adversely affect GM's water supply or discharge requirements from a cost, quality, or supply perspective. Since we share the water sources with the local communities, special interest groups are always included as stakeholders. Local GM resources, including environmental engineers (EE) and GM public relations monitor local issues to keep engaged with special interest groups. The Flint Water crisis, where GM has operations was deemed to be a reputational risk. The method of engagement varies based on the circumstance, in the Flint water crisis example, the response by GM's employees was to donate money and provide volunteer services. An example of engagement is during the Flint water crisis hundreds of GM's United Auto Workers volunteered to deliver water bottles to a local community center and The General Motors Foundation donated $50,000 to the local United Way chapter for the purchase of water filters for city residents. Participating in local aid to the community in Flint MI, where GM has 3 facilities that manufacture vehicles and parts, reduces GM's reputational risk as we were viewed as supporting the interests of the community during the Flint water crisis.
Suppliers	Relevant, always included	GM conducted a life cycle analysis (LCA) of water use in our supply chain and found that the water use was significantly higher with 50 times the use when compared to our own operations. Water stress risk to GM Supply chain could result in interruption of our business operations and it is therefore included in our risk assessment. Using life cycle analysis for our top 100 suppliers' water use coupled with WRI Aqueduct model revealed the potential overall risk for 4 suppliers in Mexico and China. GM's local company methods identified these as being mitigated. GM became a member of CDP Water Supply Chain in 2014 and continued in 2015-2020. We included high risk suppliers in our comprehensive water management strategy. Engagement with suppliers through the CDP Water Supply Chain provides us with risk and management information to aid in the assessment, along with internal company methods. According to our LCA, the vehicle interior is the major area of water use with electric power generation as the major industry using water to manufacture auto parts. Based on tier analysis, our tier 1 suppliers are only 4% of the total water use, indicating that we also need to look further downstream in the supply chain for solutions.

	Relevance & inclusion	Please explain
Water utilities at a local level	Relevant, always included	Local water utilities are critical to our business continuity for our operations related to the quality of water supply and discharge. GM has a team of engineers at GM's central office, "Sustainable Workplaces" team (SW), and a local site utility manager (SUM) and an environmental engineer (EE) at each major facility that engage with local water utilities through regular meetings and communications. As suppliers to many facilities of water and wastewater services, Water Utilities are key stakeholder to GM. A past example involves our Detroit Factory ZERO, formerly Detroit Hantramck Assembly plant. The SUM identified a risk of high cost related to storm water discharge. The SUM and SW met with the Water Utility to work out a solution that was agreeable to both parties. GM needed cost savings and the Detroit Water Utility needed to reduce storm water in its combined sanitary and storm system. GM negotiated with the City of Detroit Water and Sewer department to develop a green tariff that GM uses for storm water discharge based on our storm water reuse project at GM's Detroit Factory ZERO, formerly Detroit-Hamtramck Assembly plant. The green tariff provides relief from the sewer fee that had been based on acreage, GM installed additional storm water ponds and filtration equipment and is reusing the storm water in its cooling towers as make up water and in the manufacturing processes.
Other stakeholder, please specify	Please select	

W3.3d

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

Water use in our direct operations is used for pre-treatment of vehicle bodies prior to painting and also for weld cooling, machining, and powerhouse operations making it vital for our operations as well as in our supply chain as identified using LCA. Water availability and quality thus requires identification and mitigation of risk in our own operations and in our supply chain to ensure continued production and parts supply. GM's water risk assessment begins with tracking internal water use information using a global system called GM2100 that monitors water use on a monthly basis. The next step is to evaluate the water supply to ensure that it is adequate to meet the demand and quality requirements. If there are any deficiencies, an action plan is developed and if funds are needed, they are included in our financial plan. Implementation of the corrective action to address any such deficiencies is done at the local plant level.

Water use data in the supply chain at tiers 1-6 is provided by Life Cycle assessment (LCA) using USEPA's EEIO database based on the input spend of over 13,500 suppliers. The analysis is performed by Climate Earth providing consumption at supplier, tiers 1-6, and by industry levels. The next step is modelling to identify risk. GM uses WRI Aqueduct models that provide a screening tool to identify potential water stressed areas globally in direct operations and prioritized by top 50 supply chains. GM uses LCA for supply chain water use data since it includes water use in all tiers. We use WRI models to provide global risk analysis of water for manufacturing in our own operations and in the supply chain. The time horizons for the assessment are current year and 2030. Internal company methods are used at each GM site to review water risk and provide mitigation methods. Each GM site has a site utility manager that is responsible for assessing water risks and implementing mitigation methods, if needed. Using a supply chain visibility and mapping tool that provides a visualization of GM's entire footprint, including our own facilities, our Tier I suppliers, and many of our Tier II suppliers we can get answers to questions about supply chain risk by superimposing information like geopolitical events, hurricanes, water scarcity and other possible disruptions.

W4. Risks and opportunities

W4.1

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

Yes, only within our direct operations

W4.1a

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

Within our enterprise risk management process, GM's risk assessment process includes both a quantitative and qualitative assessment of risks and opportunities. From a quantitative perspective, GM evaluates risks and opportunities based on their potential impact on certain key financial statement amounts and operating results (e.g., assets, revenues, earnings, cash flow, etc.). From a qualitative perspective, GM evaluates risks and opportunities based on the consideration of all of the other relevant facts and circumstances, including strategic significance, potential impact on reputation, and probability of occurrence. For example, while the water-related risks at any individual GM facility may not be substantive to GM as a whole, GM could face a substantive water-related risk related to its ability to build new manufacturing capacity in regions without sufficient water supply to support necessary production volumes. Therefore, risks identified in this report as having a "substantive" impact will vary from risk to risk in terms of quantitative and qualitative perspectives. The use of "significant," "substantive," "material," or "materiality" in this report and our other sustainability reporting is not related to or intended to convey matters or facts that could be deemed "material" to a reasonable investor as referred to under U.S. securities laws or similar requirements of other jurisdictions.

W4.1b

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

	Total number of facilities exposed to water risk	% company-wide facilities this represents	Comment
Row 1	5	1-25	Using WRI Aqueduct high risk overall category, 5 GM direct operation facilities indicated substantive site risk for water stress. Three are located in Mexico and 2 are in our joint venture plants in China. The Silao Mexico Assembly facility uses deep non-renewable wells that are showing signs of stress and mitigation efforts with near zero liquid discharge are being implemented at the site. The risk at Silao was identified using internal company methods by the site utility manager and mitigated with installation of water reuse equipment. San Luis Potosi, MX site has similar, but deeper non-renewable wells and the risk was identified prior to construction with mitigation by installation of Zero-Liquid Discharge and water reuse. In Ramos Arizpe Mexico, we are updating the paint technology and have to increase the quantity of wastewater that is treated and reused in the process due to water stress in the area. The risks in the 2 GM JV Assembly plants in northern China are drought related that have recently been mitigated by the government from use of alternate water supplies and irrigation consumption reduction.

W4.1c

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

Country/Area & River basin

Mexico	Other, please specify (Rio Grande - Bravo)

Number of facilities exposed to water risk
1

% company-wide facilities this represents
Less than 1%

Production value for the metals & mining activities associated with these facilities
<Not Applicable>

% company's annual electricity generation that could be affected by these facilities
<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities
<Not Applicable>

% company's total global revenue that could be affected
1-10

Comment
Ramos plant provides about 3% of our total production at GM that includes many key products.

Country/Area & River basin

Mexico	Other, please specify (Rio Lema)

Number of facilities exposed to water risk
1

% company-wide facilities this represents
Less than 1%

Production value for the metals & mining activities associated with these facilities
<Not Applicable>

% company's annual electricity generation that could be affected by these facilities
<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities
<Not Applicable>

% company's total global revenue that could be affected
1-10

Comment
Silao plant manufactures about 5% of GM total volume, including key products for our company

Country/Area & River basin

China	Other, please specify (China Coast)

Number of facilities exposed to water risk
1

% company-wide facilities this represents

Less than 1%

Production value for the metals & mining activities associated with these facilities
<Not Applicable>

% company's annual electricity generation that could be affected by these facilities
<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities
<Not Applicable>

% company's total global revenue that could be affected
1-10

Comment
Qingdao provides about 9% of GM production volume, including a battery electric vehicle, the E200 that travels about 200 km on a single charge.

Country/Area & River basin

China	Other, please specify (China Coast)

Number of facilities exposed to water risk
1

% company-wide facilities this represents
Less than 1%

Production value for the metals & mining activities associated with these facilities
<Not Applicable>

% company's annual electricity generation that could be affected by these facilities
<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities
<Not Applicable>

% company's total global revenue that could be affected
1-10

Comment
Dongyue (JV) provides about 5% of our total volume, including key products for China market

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Country/Area & River basin

Mexico	Other, please specify (Mexico, Northwest Coast)

Number of facilities exposed to water risk
1

% company-wide facilities this represents
1-25

Production value for the metals & mining activities associated with these facilities
<Not Applicable>

% company's annual electricity generation that could be affected by these facilities
<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities
<Not Applicable>

% company's total global revenue that could be affected
1-10

Comment
San Luis Potosi, MX produces Crossover vehicles and transmissions and is about 7% of our North America production.

W4.2

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

Country/Area & River basin

Mexico	Other, please specify (Mexico, Northwest Coast)

Type of risk & Primary risk driver

Physical	Drought

Primary potential impact
Reduction or disruption in production capacity

Company-specific description
Increases in the frequency of drought conditions can further depress water availability for production in water-stressed areas. GM has production facilities in Mexico at Silao Assembly, San Luis Potosi Assembly, and Ramos Arizpe Assembly, an area that was hit hard by drought in recent years, and there is a risk that increases in the frequency of such events could temporarily disrupt production due to lack of water availability.

Timeframe
More than 6 years

Magnitude of potential impact
Medium

Likelihood
Very unlikely

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
53000000

Potential financial impact figure - minimum (currency)
<Not Applicable>

Potential financial impact figure - maximum (currency)
<Not Applicable>

Explanation of financial impact
For example, we estimate the San Luis Potosi Assembly represents approximately 7% of production units of our North America operations. We estimate that if San Luis Potosi production were stopped, a 7% reduction in our production of certain vehicles in North America could approximate a $32 million reduction in earnings before taxes-adjusted, using a one month impact in this example and assuming production could not be recovered.

Primary response to risk
Adopt water efficiency, water reuse, recycling and conservation practices

Description of response
GM integrated water management into its annual business planning process and set targets for each facility to reduce water use intensity by 35% by 2035 from a 2010 baseline. Reduction methods are implemented at a facility level and include conservation with behavioral activities, improving equipment efficiency, and reuse. When plants are located in water-stressed areas, special consideration is given to water treatment technologies. A Zero Liquid Discharge (ZLD) system was installed at our San Luis Potosi, Mexico facility that produces vehicles and transmissions and is being operated to reuse water in the process, reduce additional withdrawal from deep wells, and reduce the risk of lack of water for production while providing an opportunity to continue production without interruption. The installed cost was $12M and ongoing operations are $200k.

Cost of response
12200000

Explanation of cost of response
A Zero Liquid Discharge (ZLD) system was installed at our San Luis Potosi, Mexico facility that produces vehicles and transmissions and is being operated to reuse water in the process, reduce additional withdrawal from deep wells, and reduce the risk of lack of water for production while providing an opportunity to continue production without interruption. The installed cost was $12M and ongoing operations are $200k.

W4.2c

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

	Primary reason	Please explain
Row 1	Risks exist, but no substantive impact anticipated	WRI Aqueduct model identified 14 high risk GM suppliers for overall water risk in auto parts manufacturing, plastics, and casting industries, all located in Mexico, except for 1 in California, US. The majority of GM tier 1 suppliers in Mexico are in close proximity to GM Assembly or manufacturing facilities and are exposed to similar water scarcity risks as GM's direct operations. GM's experience with uninterrupted delivery from these 14 suppliers demonstrates that water risk is not substantive as their manufacturing operations have not been disrupted due to water security and they are meeting reliable supply requirements as a result of mitigating water risks. This assessment will be completed annually to assure continued reliability. Additionally, to ensure that there is no substantive risk due to water scarcity or other potential supply interruptions for these 14 suppliers and others, multiple suppliers are sourced for similar parts. We recently began using a supply chain visibility and mapping tool that provides a visualization of GM's entire footprint, including our own facilities, our Tier I suppliers, and many of our Tier II suppliers. Using this map as a base, we can get answers to questions about supply chain risk by superimposing information like geopolitical events, hurricanes, water scarcity, and other possible disruptions. With more than 200 incidents disrupting our supply chain every year, from earthquakes and floods to civil unrest and regulatory actions, it's easy to see why robust tracking and visibility tools are essential.

W4.3

(W4.3) Have you identified any water-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes, we have identified opportunities, and some/all are being realized

W4.3a

(W4.3a) Provide details of opportunities currently being realized that could have a substantive financial or strategic impact on your business.

Type of opportunity

Efficiency

Primary water-related opportunity

Cost savings

Company-specific description & strategy to realize opportunity

GM is committed to finding ways to not only reduce water used in our operations, but to extend the benefits of more efficient processes to others. For example, GM identified an opportunity to reduce water stress in the City of Detroit at our Detroit Hamtramck Assembly plant, now renamed Detroit Factory ZERO, as well as to reduce our operating cost. Based on water stress in the City during storm events, due to combined sanitary and storm drains, and the high cost to GM for discharging to the City combined sanitary and storm water system, GM decided to take action and increased the storm water storage capacity to treat and reuse the rainwater back into the process, designed for a 100 year storm event. We finished our first full year reusing storm water for process water at the Assembly plant. The savings equated to nearly $2 million per year for GM. The project also benefits the city of Detroit. By creating a 100- year pond to collect storm water, we reduce storm water discharge to the City which reduces water stress during storm events. The collected water is treated and used in cooling towers and for other plant uses. GM is looking to replicate this concept at other sites with similar environmental and economic conditions.

Estimated timeframe for realization

1 to 3 years

Magnitude of potential financial impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

2000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact

Cost savings per year in water and sewer cost through the reuse of storm water in direct operations saves GM $2M annually.

W5. Facility-level water accounting

W5.1

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

Facility reference number

Facility 1

Facility name (optional)

Silao Vehicle Assembly and Global Propulsion

Country/Area & River basin

Mexico	Other, please specify (Rio Lema)

Latitude

20.952169

Longitude

-101.426697

Located in area with water stress

Yes

Primary power generation source for your electricity generation at this facility

<Not Applicable>

Oil & gas sector business division

<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

617

Comparison of total withdrawals with previous reporting year
Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Withdrawals from brackish surface water/seawater
0

Withdrawals from groundwater - renewable
0

Withdrawals from groundwater - non-renewable
617

Withdrawals from produced/entrained water
0

Withdrawals from third party sources
0

Total water discharges at this facility (megaliters/year)
340

Comparison of total discharges with previous reporting year
Higher

Discharges to fresh surface water
0

Discharges to brackish surface water/seawater
0

Discharges to groundwater
0

Discharges to third party destinations
340

Total water consumption at this facility (megaliters/year)
617

Comparison of total consumption with previous reporting year
Lower

Please explain
GM's Silao Mexico assembly complex produces light duty trucks for GM customers and is located in the state of Guanajuato. Light duty trucks comprise a significant portion of our current earnings, so Silao is an important strategic part of our manufacturing portfolio. The sole water supply to our Silao facility is from 300-meter deep non-renewable wells and we experienced stress on the wells with pumps tripping out on low well level. We began planning for a project to increase the amount of water reuse for process water to relieve stress on the wells. Over the last two years we spent $8M USD to install a membrane bioreactor (MBR) and reverse osmosis (RO) equipment to increase the amount of process water reuse and replaced one of the wells to reduce stress on the well water system. The improved water reuse system processes 1600 M3 per day of wastewater for reuse as process water. Operations of the completed project provided a reduction in water withdrawal of 13% and provided increased water security for the Silao manufacturing site.

Facility reference number
Facility 2

Facility name (optional)
JV 1 Dongyue

Country/Area & River basin

China	Other, please specify (China Coast)

Latitude
37.413322

Longitude
121.373842

Located in area with water stress
Yes

Primary power generation source for your electricity generation at this facility
<Not Applicable>

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
626

Comparison of total withdrawals with previous reporting year
About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Withdrawals from brackish surface water/seawater
0

Withdrawals from groundwater - renewable
0

Withdrawals from groundwater - non-renewable
0

Withdrawals from produced/entrained water
0

Withdrawals from third party sources
626

Total water discharges at this facility (megaliters/year)
551

Comparison of total discharges with previous reporting year
About the same

Discharges to fresh surface water
0

Discharges to brackish surface water/seawater
0

Discharges to groundwater
0

Discharges to third party destinations
551

Total water consumption at this facility (megaliters/year)
188

Comparison of total consumption with previous reporting year
About the same

Please explain
Reduced vehicle production at our JV assembly plant in Dongyue due to pandemic resulted in reduced water consumption. Consumption is calculated using water balance and engineering estimates as standard calculation of withdrawal minus discharge is inaccurate as groundwater infiltrates into the wastewater treatment system causing the calculated consumption to be lower than actual.

Facility reference number
Facility 3

Facility name (optional)
JV 2 Qingdao

Country/Area & River basin

China	Other, please specify (China Coast)

Latitude
35.595509

Longitude
120.101662

Located in area with water stress
Yes

Primary power generation source for your electricity generation at this facility
<Not Applicable>

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
655

Comparison of total withdrawals with previous reporting year
Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Withdrawals from brackish surface water/seawater
0

Withdrawals from groundwater - renewable
0

Withdrawals from groundwater - non-renewable
0

Withdrawals from produced/entrained water
0

Withdrawals from third party sources
655

Total water discharges at this facility (megaliters/year)
349

Comparison of total discharges with previous reporting year
Lower

Discharges to fresh surface water
0

Discharges to brackish surface water/seawater
0

Discharges to groundwater
0

Discharges to third party destinations
349

Total water consumption at this facility (megaliters/year)
188

Comparison of total consumption with previous reporting year
Lower

Please explain
Reduced vehicle production at our JV assembly plant in Qingdao due to pandemic resulted in reduced water consumption. Consumption is calculated using water balance and engineering estimates as the standard calculation of withdrawal minus discharge is inaccurate as groundwater infiltrates into the wastewater treatment system causing the calculated consumption to be lower than actual.

Facility reference number
Facility 4

Facility name (optional)
Ramos Arizpe

Country/Area & River basin

Mexico	Other, please specify (River Grande Bravo)

Latitude
25.6571

Longitude
-100.711

Located in area with water stress
Yes

Primary power generation source for your electricity generation at this facility
<Not Applicable>

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
548

Comparison of total withdrawals with previous reporting year
Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Withdrawals from brackish surface water/seawater
0

Withdrawals from groundwater - renewable
0

Withdrawals from groundwater - non-renewable
548

Withdrawals from produced/entrained water
0

Withdrawals from third party sources
0

Total water discharges at this facility (megaliters/year)
54

Comparison of total discharges with previous reporting year
Lower

Discharges to fresh surface water
47

Discharges to brackish surface water/seawater
0

Discharges to groundwater
7

Discharges to third party destinations
0

Total water consumption at this facility (megaliters/year)
164

Comparison of total consumption with previous reporting year
Lower

Please explain
GM's Ramos Arizpe vehicle complex in Mexico produces vehicles and powertrains and is an important, strategic, manufacturing asset. Ramos plant had a reduction in vehicle production in 2020 compared to 2019 and therefore, water consumption decreased accordingly. Consumption is calculated using water balance and engineering estimates as withdrawal minus discharge method is inaccurate as groundwater infiltrates into the wastewater treatment system causing the calculated consumption to be lower than actual. The water reuse capacity is being increased at GM Ramos Arizpe complex to reduce the impact on the deep wells and to ensure water supply to this important automotive manufacturing complex as shown in the small amount of discharge compared to withdrawal.

Facility reference number
Facility 5

Facility name (optional)
San Luis Potosi Assembly complex

Country/Area & River basin

Mexico	Other, please specify (Mexico, Northwest Coast)

Latitude
24.0251

Longitude
-104.604

Located in area with water stress
Yes

Primary power generation source for your electricity generation at this facility
<Not Applicable>

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
180

Comparison of total withdrawals with previous reporting year
Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Withdrawals from brackish surface water/seawater
0

Withdrawals from groundwater - renewable
0

Withdrawals from groundwater - non-renewable
180

Withdrawals from produced/entrained water
0

Withdrawals from third party sources
0

Total water discharges at this facility (megaliters/year)
63

Comparison of total discharges with previous reporting year
Lower

Discharges to fresh surface water
0

Discharges to brackish surface water/seawater
0

Discharges to groundwater
63

Discharges to third party destinations
0

Total water consumption at this facility (megaliters/year)
54

Comparison of total consumption with previous reporting year
Lower

Please explain
GM's San Luis Potosi (SLP) vehicle complex in Mexico produces vehicles and powertrains and is an important, strategic, manufacturing asset. SLP plant had a decrease in vehicle production in 2020 compared to 2019 and therefore, water consumption decreased accordingly. Consumption is calculated using water balance and engineering estimates as withdrawal minus discharge method is inaccurate as groundwater infiltrates into the wastewater treatment system causing the calculated consumption to be lower than actual. The mitigation method of Zero Liquid Discharge for process wastewater reuse helps to reduce the impact on the wells and to ensure water supply to this important automotive complex.

W5.1a

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

Water withdrawals – total volumes

% verified
76-100

What standard and methodology was used?
The verification was conducted in accordance with ISO 14064:3, the AA1000 AccountAbility Principles Standard (2008) and Stantec's Standard Operating Procedures developed for accreditation to ISO 14065

Water withdrawals – volume by source

% verified
Not verified

What standard and methodology was used?
<Not Applicable>

Water withdrawals – quality

% verified
Not verified

What standard and methodology was used?
<Not Applicable>

Water discharges – total volumes

% verified
Not verified

What standard and methodology was used?
<Not Applicable>

Water discharges – volume by destination

% verified
Not verified

What standard and methodology was used?
<Not Applicable>

Water discharges – volume by treatment method

% verified
Not verified

What standard and methodology was used?
<Not Applicable>

Water discharge quality – quality by standard effluent parameters

% verified
Not verified

What standard and methodology was used?
<Not Applicable>

Water discharge quality – temperature

% verified
Not verified

What standard and methodology was used?
<Not Applicable>

Water consumption – total volume

% verified
Not verified

What standard and methodology was used?
<Not Applicable>

Water recycled/reused

% verified
Not verified

What standard and methodology was used?
<Not Applicable>

W6. Governance

W6.1

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

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

W6.1a

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

	Scope	Content	Please explain
Row 1	Company-wide	Description of business dependency on water Description of water-related performance standards for direct operations Description of water-related standards for procurement Reference to international standards and widely-recognized water initiatives Company water targets and goals Commitment to align with public policy initiatives, such as the SDGs Commitments beyond regulatory compliance Commitment to water-related innovation Commitment to water stewardship and/or collective action Commitment to safely managed Water, Sanitation and Hygiene (WASH) in the workplace Acknowledgement of the human right to water and sanitation	GM operates under a water policy that provides clean water for all occupants of our facilities globally as well as sanitation as well as our Guiding Environmental Commitments. As we operate in various countries, some without standards, we set maximum contaminant levels in potable water to provide clean water to all. In countries without standards or with lower standards than GM's standards, GM operates under GM standards. Additionally, consistent with UN Sustainable Development Goal 6, to ensure availability and sustainable management of water and sanitation, GM operates under Guiding Environmental Commitments as stated in section W0.1. We are dedicated to: -responsibly using water while taking actions that preserve water quality and conservation across our operations, in our supply chain, and in the communities in which we operate and we will act by: - Reducing water used in our operations and being mindful of how our water use affects our communities. - Communicating best practices on our water reduction and reuse initiatives globally. - Listening to our employees on ways to conserve water. -Preventing deforestation, conserving water, caring for natural resources in and around our facilities and the communities where we operate - We believe climate change is real and are committed to the public disclosure of our greenhouse gas emissions and taking actions to reduce them. Consistent with UN Goal 6, GM has integrated water management into its business plan, developed a public goal for water intensity reduction of our direct operations, and implemented water efficiency projects and conservation measures at our facilities. As GM's Environmental Principles require conserving resources, including water at every stage of the product life cycle. Our policy and Guiding Environmental Commitments are publicly available and extends to all GM operations. Performance standards are established monthly to ensure that we achieve the goals. For our supply chain, GM formally supports the guiding principles of Automotive Industry Action Group (AIAG) guiding principles for environmental sustainability that includes an expectation that suppliers will reduce water consumption. WSS-PS16-TS01 Global Drinking Water Quality Rev 2019Mar01.pdf

W6.2

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

Yes

W6.2a

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

Position of individual	Please explain
Board-level committee	GM's Board Committee, "Governance and Corporate Responsibility" is committed to overseeing the company's integration of environmental, social and governance ("ESG") principles, including water, throughout the enterprise. The oversight includes frequent ESG strategic discussions by the Board's Governance and Corporate Responsibility Committee. GM is fortunate that several of its Board members have extensive business experience in managing ESG and climate-related issues, such as transitioning from high- to low-carbon-emitting technologies and managing environmental impacts within the supply chain. The Board is committed to elevating GM's leadership profile and reputation among investors, policymakers and others on ESG issues and practices and believes GM has a unique opportunity to address these important issues. The Governance and Corporate Responsibility Committee (GCRC) of the GM Board of Directors is comprised of three independent directors. The Committee selects members of the Board; provides leadership in shaping GM's corporate governance which is important for long-term environmental, social and corporate governance "ESG" success; and oversees GM's policies and strategies related to Sustainability which is achieved through a standing agenda item for ESG related activities including water-related updates. The members of this committee have extensive leadership and strategy experience gained at companies respected for their ESG performance. Their input is valuable as GM further integrates sustainability into its business strategy and addresses climate change and water security on its drive toward a future of zero emissions. The committee is responsible for addressing all substantive risks, including water-related risks. An example of board interest in water was a request for water use benchmarking information for Auto OEMs. We provided water use per vehicle data for Auto OEMs based on their corporate sustainability reports that compared GM to other OEMs.

W6.2b

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

	Frequency that water-related issues are a scheduled agenda item	Governance mechanisms into which water-related issues are integrated	Please explain
Row 1	Scheduled - all meetings	Monitoring implementation and performance Overseeing acquisitions and divestiture Overseeing major capital expenditures Providing employee incentives Reviewing and guiding annual budgets Reviewing and guiding business plans Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding strategy Reviewing and guiding corporate responsibility strategy Reviewing innovation/R&D priorities Setting performance objectives	The Governance and Corporate Responsibility Committee (GCRC) of the Board of Directors of General Motors assists the board in its oversight of the Company's governance structures, programs, and policies., It brings to the attention of the Board and management as appropriate, current and emerging global political, social, and policy issues that may affect the business operations, profitability, or public image or reputation of the Company. The GCRC oversees global public policy matters as well as specific functions of the Company, as appropriate, including strategy, action plans, and risk management, including climate change and water related substantive risks. Company functions reviewed by the GCRC include Legal, Global Public Policy, sustainability including climate change, corporate social responsibility, and philanthropic activities. GCRC receives regular reports from the Strategic Risk Management (SRM) team, led by an executive director with dedicated resources, has risk management responsibility and is supported by the Risk Advisory Council (RAC)—executives who directly report to the Senior Leadership Team (SLT). In 2019, GM established its first Chief Sustainability Officer (CSO). The GCRC and SLT are linked to GM's Sustainability Office (SO) encompassing all aspects of GM's business with daily functional lead from CSO. The SO solicits feedback from Internal and External advisory groups related to Climate Change and water security issues. The CSO is a member of GM's Manufacturing Leadership Team (MLT) comprised of Manufacturing VPs for all global regions. Responsibility for strategic water related issues resides in MLT as the team has overall responsibility for business continuity and water security for GM's direct operations and in the supply chain. Water subject matter expertise resides within Sustainable Workplaces (SW) team. The CSO reports monthly to the MLT on performance to water withdrawal targets. The MLT meets monthly and a standard agenda item is reviewing achievement of GM's public water withdrawal goal in cubic meters of water per vehicle for each region as presented by the CSO. If a target is not met, countermeasures are presented to ensure there is a plan to meet the targets. Additionally, business continuance and risk management are part of the team's responsibilities, including capital allocation. All of the support functions - HR, Finance, Purchasing, Quality, Safety, and Sustainable Workplaces are represented on the MLT.

W6.3

(W6.3) Provide the highest management-level position(s) or committee(s) with responsibility for water-related issues (do not include the names of individuals).

Name of the position(s) and/or committee(s)

Chief Sustainability Officer (CSO)

Responsibility

Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

More frequently than quarterly

Please explain

In 2019, GM created a Sustainability Office and named our first Chief Sustainability Officer (CSO). This Office is charged with working cross-functionally to ensure responsible consumption of raw materials, including water, and other sustainability issues. The CSO is a member of the Manufacturing Leadership team (MLT) comprised of regional VPs of manufacturing and leadership from other functions that provide services to manufacturing. The GCRC board committee and senior leadership team (SLT) are linked to the (SO) encompassing all aspects of GM's business with daily functional lead from CSO. On a monthly basis GM's performance to its public water goals are reviewed by the MLT by CSO. If water KPIs are not on the target pathway, countermeasures are developed and reviewed by the MLT. Strategic plans for facilities and equipment and tactical measures related to risk mitigation are managed by the members of the MLT, including water supply and water discharge risks.

W6.4

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

	Provide incentives for management of water-related issues	Comment
Row 1	Yes	

W6.4a

(W6.4a) What incentives are provided to C-suite employees or board members for the management of water-related issues (do not include the names of individuals)?

	Role(s) entitled to incentive	Performance indicator	Please explain
Monetary reward	Chief Sustainability Officer (CSO) Other, please specify (Sustainability Managers)	Reduction of water withdrawals Reduction in consumption volumes	Water use per vehicle reduction of 35% from 2010 to 2035 is one of GM's public sustainability goals that drives incentives for the CSO and Sustainability Managers. An example in our operations is that our CSO and Sustainability managers must meet water withdrawal targets at company, regional, and facility levels, that is also related to water consumption, for their respective areas as one of their goals that relates to their individual incentive compensation. Individual performance is based on GM's "Commitment and Accountability Partnership" or CAP system for performance evaluation and compensation. CAP goals are set at the beginning of the year and reviewed every 6 months for performance. CAP performance is used to establish the amount of our variable portion of GM's total compensation on an annual basis.
Non-monetary reward	Chief Sustainability Officer (CSO) Other, please specify (GM employees reporting to CSO)	Reduction of water withdrawals Reduction in consumption volumes Improvements in efficiency - direct operations Implementation of employee awareness campaign or training program Implementation of water-related community project	The newly appointed Chief Sustainability Officer (CSO) directs the Sustainable Workplaces team that provides services to plants to meet water reduction activities, employee awareness, and leads community projects related to water security. We have a GM Recognition program that is used to recognize exceptional performance and use our internal communications platform, Socrates, to feature exceptional performance. An example is focused article in Socrates regarding community outreach from the Flint Michigan area. Employees in Flint and Grand Blanc are located within the Flint River watershed, and they make sure that their watershed stays pure by participating in river clean-up events and storm drain stencilling so that folks know where their neighborhood drains go. They also participate in the Flint River GREEN program, mentoring local students and assisting with monitoring rivers to assess water quality and promote STEM education.

W6.5

(W6.5) Do you engage in activities that could either directly or indirectly influence public policy on water through any of the following?

Yes, direct engagement with policy makers

W6.5a

(W6.5a) What processes do you have in place to ensure that all of your direct and indirect activities seeking to influence policy are consistent with your water policy/water commitments?

Engagement with policy makers is done appropriately at the local level by our site Environmental Leaders (EL) who are part of a central team, Sustainable Workplaces (SW). Since SW is aware of global activities and is charged with supporting our environmental principles, there is consistency in activities to influence policy with local municipal entities by our ELs. Site ELs report to the VP of Sustainable Workplaces and identify any inconsistencies in activities related to our water policy and company environmental commitments for guidance and corrective action. Corrective action plans are tracked in a GM workflow system managed by Reliance to ensure implementation. An example is if a GM facility receives a notice of violation for water discharge, a corrective action plan is developed, tracked, and has regular follow-up actions until resolved.

W6.6

(W6.6) Did your organization include information about its response to water-related risks in its most recent mainstream financial report?

No, but we plan to do so in the next two years

W7. Business strategy

W7.1

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

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	Yes, water-related issues are integrated	11-15	Strategic planning for facilities includes evaluation of water security in the local areas where new facilities are being planned. Along with other planning activities, water availability and quality are considered. If an area has water stress, then the business plan will include additional capital for water reuse, e.g. Zero Liquid Discharge or other reuse technologies to reduce the stress on local water supplies as needed. Similarly, for existing facilities that discover water stress issues, capital planning will include mitigation for water reuse. An example is at our Assembly plant in Silao, Mexico that is served by deep non-renewable wells where wells began showing stress and a plan was developed and is currently being implemented to increase the amount of water reuse to relieve the stress on the wells. The long term horizons coincide with GM's long term planning cycles for facilities and our future water goal planning will be to 2030.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	11-15	GM's water intensity reduction goals are long term (2010-2035) and are integrated into our medium and long-term objectives. Targets are established for regions and sites and progress is evaluated monthly as water withdrawal per unit of production metrics are integrated into our Global Manufacturing System (GMS). We implemented targets at all of our global manufacturing facilities for water. If targets are not met, countermeasures are developed to meet the targets and reviewed by management regularly. An example is in North America, where some facilities did not meet their targets and using root cause analysis, countermeasures were developed including employee activities, such as water treasure hunts, repairing leaks and exploring additional water reuse.
Financial planning	Yes, water-related issues are integrated	11-15	As facilities plans reveal a need for capital investment for water security, including water scarcity, quality, and discharge at facilities, the required funds are included in our 5-year portfolio spending plans. An example is at our Assembly plant in Silao Mexico that is served by deep non-renewable wells where wells began showing stress a plan was developed and included in our portfolio plan to spend 7 million USD on water reuse to reduce water stress on the non-renewable wells. The long term planning horizons coincide with GM's long term planning cycles for facilities, which last for 15 or more years.

W7.2

(W7.2) What is the trend in your organization's water-related capital expenditure (CAPEX) and operating expenditure (OPEX) for the reporting year, and the anticipated trend for the next reporting year?

Row 1

Water-related CAPEX (+/- % change)

20

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

0

Water-related OPEX (+/- % change)

141

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

0

Please explain

To sustain GM's aging water infrastructure, we use a dedicated fund for asset sustainment that is prioritized based on safety, regulatory, high risk, and strategic purposes. In 2020, we had 19 projects that were related to water and wastewater treatment infrastructure with capital and operating expense in millions of dollars. The year over year variation is dependent on many factors and resulted in increases in 2020 compared to 2019 - available of funds, current year money needs for high risk water infrastructure, and other strategic needs. We expected a carryover in spend. One project as an example was to upgrade a non-renewable well water treatment plant in water stressed GM manufacturing complex in Ramos Arizpe, MX

W7.3

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

	Use of climate-related scenario analysis	Comment
Row 1	Yes	The integration of sustainability and climate change into our business continues to be a focus. As an example of this, we recently addressed climate change risks and opportunities through a scenario planning workshop. The workshop was based on a key assumption that the world is on a path by 2030 to limit emissions so that temperatures increase no more than 2 degrees Celsius. Sponsored by GM's Corporate Secretary and the head of GM's product portfolio planning. Goals included developing and understanding a range of different world scenarios; identifying risks, opportunities and success factors for GM; and making recommendations for GM to analyze, prepare, adapt and act. The group considered four different scenarios in a maximum 2-degree warmer world and walked through a three-step process. The first step was to explore uncertainties and then to define success in this future world. The final step involved an analysis to determine what GM should be doing now to influence its future.

W7.3a

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

No

W7.4

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

Row 1

Does your company use an internal price on water?

Yes

Please explain

GM considers the "True cost of water" when evaluating a business case for water. The True cost includes water supply, energy cost to pump and heat, disposal costs, maintenance, infrastructure, and risk factor cost. We are participating with other companies in a project with The Water Environment & Reuse Foundation to develop water reuse specifications and tools. One of the tools being developed is an ROI water calculator that will incorporate a shadow price of water for business case evaluations. An example using a total cost of water was at a recent Water Treasure Hunt workshop at our GM Korea Assembly site in Bupyeong, South Korea. We justified water efficiency using Total cost of water and the added heat savings added was enough to meet our project hurdle rate for approvals.

W8. Targets

W8.1

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

	Levels for targets and/or goals	Monitoring at corporate level	Approach to setting and monitoring targets and/or goals
Row 1	Company-wide targets and goals Business level specific targets and/or goals Site/facility specific targets and/or goals	Targets are monitored at the corporate level Goals are monitored at the corporate level	One of GM's Environmental Principles is to conserve resources as stated in our 2020 Corporate Sustainability Report, page 42 - "Water Conservation and Quality - We are committed to responsibly using water while taking actions that preserve water quality and conservation across our operations, in our supply chain and in the communities in which we operate". GM has publicly committed to reduce Water withdrawal intensity (M3/Vehicle), including all manufacturing and non-manufacturing facility water withdrawal (municipal, surface, well), normalized by vehicle production by 35% from 2010 baseline to 2035. The goal was set based on consideration of the previous 10-year reduction of over 40% (2000-2010). A straight-line extrapolation would equate to 100% reduction by 2022, which is not feasible. We used aggressive, but reasonable estimates of reduction based on the law of diminishing return to set the 2035 goal. Targets are set each year to meet the 2035 goal at global, regional, and site levels. We are currently not on track to meet the pathway for 2035 in 2020 due to pandemic vehicle volumes with 13% reduction in 2020 since 2010 and a pathway target of 16%. With production volumes forecasted to increase in 2021, we expect to get back on our pathway to 2035.

W8.1a

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

Target reference number
Target 1

Category of target
Product water intensity

Level
Company-wide

Primary motivation
Reduced environmental impact

Description of target
We measure and manage resources, including water use, at all manufacturing locations, engineering centers, parts distribution centers and, proving ground sites around the world. The target is to reduce water withdrawal intensity (M3/Vehicle) aggregated at all global facilities by 35% from 2010 to 2035. Our strategy across these facilities, however, has common attributes: -It's holistic, in that we approach resource conservation from a systems perspective to develop optimal strategies. -It's heavily reliant on innovation, using as much creativity and out-of-the-box thinking in our conservation efforts as we do in innovating new vehicle technologies. In fact, we often work across functions, such as manufacturing and vehicle development, as we work to realize new resource efficiencies. -Water conservation and efficiency is integrated into our business plan with dedicated resources, funding, and monthly scorecard monitoring and countermeasures requirements for non-conformance.

Quantitative metric
% reduction per product

Baseline year
2010

Start year
2010

Target year
2035

% of target achieved
37

Please explain
GM has reduced 2020 water intensity by 13% since 2010 with water efficiency projects, water reuse, and conservation activities. We are well on our pathway in 2020 to achieving our target by 2035 with 37% performance to goal of 40%. With aggressive 2035 targets GM is planning, Water Treasure Hunts, conservation, and efficiency projects in future years and are forecasting to meet our 2035 goal.

W8.1b

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

Goal
Watershed remediation and habitat restoration, ecosystem preservation

Level
Company-wide

Motivation
Reduced environmental impact

Description of goal
The goal is to improve wildlife habitats by having a Wildlife Habitat Certification (or equivalent) at each GM manufacturing site, where feasible by 2020 from a baseline of 2010. The goal was set to support one of our Environmental Principles " We are committed to actions to restore and preserve the environment." Setting a global goal provides each facility the opportunity to demonstrate our commitment. Many studies show the direct relationship of protecting wildlife habitats and water quality. One paper published by Purdue University shows the positive impact on water quality with land use conservation and habitats-"There are three main strategies in the Planning ... for communities to use as they plan their future use and protection of vital and critical drinking water, farmlands, forests, and recreation areas. They are: 1) Plan to protect critical natural resources in your community while still accommodating growth through natural resource-based planning. 2) Minimize the impact to initial natural resources resulting from land use change through appropriate site designs and use of best management practices. (Wildlife Habitats) 3) Mitigate the negative impacts to critical natural resources or loss of open space Each major GM manufacturing facility has an Environmental Leader (EL) that is responsible to implement methods and objectives on the business plan related to the environment, including Wildlife Habitats.

Baseline year
2010

Start year
2011

End year
2020

Progress
We added 3 new certified wildlife habitats during 2019, thanks to the commitment and enthusiasm of our manufacturing employees and leadership. We are currently are at 100 percent of our goal with a total of 77 wildlife habitats, compared to a goal of 77 wildlife habitats. We adjusted our goal, consistent with the GHG Protocol, based on GM divestiture of facilities since 2010. We use Wildlife Habitat Council to provide advice and use their conservation certification as the metric to track performance to our target. Our Biodiversity goal aligns with our water withdrawal target to improve our water security.

W9. Verification

W9.1

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

Yes

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W9.1a

(W9.1a) Which data points within your CDP disclosure have been verified, and which standards were used?

Disclosure module	Data verified	Verification standard	Please explain
W8 Targets	Water withdrawal at GM operations globally using AA1000 standards	AA1000AS	GM contracted with an independent third party to verify 100% of our water withdrawal at our global operations. (see page 4 of the attachment, Table 3)
W8 Targets	Water withdrawal year over year reduction at GM operations globally using AA1000 standards	AA1000AS	GM contracted with an independent third party to verify 100% of our water withdrawal reduction year over year at our global operations to confirm continuous improvement. (see page 4 of the attachment, Table 3)
W8 Targets	Vehicle production volume (number of vehicles produced) was verified by an independent 3rd party in 2020	AA1000AS	GM contracted with an independent third party to verify 100% of our vehicle production at our global operations to confirm the denominator for Water intensity calculation. (see page 4 of the attachment, Table 3)

W10. Sign off

W-FI

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

W10.1

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

	Job title	Corresponding job category
Row 1	Vice President of Sustainable Workplaces and Chief Sustainability Officer of General Motors Company	Chief Sustainability Officer (CSO)

W10.2

(W10.2) Please indicate whether your organization agrees for CDP to transfer your publicly disclosed data on your impact and risk response strategies to the CEO Water Mandate's Water Action Hub [applies only to W2.1a (response to impacts), W4.2 and W4.2a (response to risks)].

Yes