### **CDP**

# CDP 2014 Water 2014 Information Request Freeport-McMoRan Copper & Gold Inc.

**Module: Introduction** 

Page: W0. Introduction

W0.1

#### Introduction

Please give a general description and introduction to your organization.

Freeport-McMoRan (the Company) is a premier United States-based natural resources company with an industry-leading global portfolio of mineral assets, significant oil and gas resources and a growing production profile. Freeport-McMoRan is the world's largest publicly traded copper producer.

Freeport-McMoRan's portfolio of assets includes the Grasberg minerals district in Indonesia, one of the world's largest copper and gold deposits; significant mining operations in the Americas, including the large-scale Morenci minerals district in North America and the Cerro Verde operation in South America; the Tenke Fungurume minerals district in the Democratic Republic of Congo (DRC); and significant oil and natural gas assets in North America, including reserves in the Deepwater Gulf of Mexico (GOM), onshore and offshore California, in the Eagle Ford shale play in Texas, in the Haynesville shale plays in Louisiana, in the Madden area in Central Wyoming, and an industry-leading position in the emerging Inboard Lower Tertiary/Cretaceous natural gas trend in the shallow waters of the GOM and onshore in South Louisiana.

Our oil and gas subsidiary, Freeport-McMoRan Oil &Gas Inc. (FM O&G), formed in the second-quarter 2013, is excluded from our response. Due to ongoing water rights litigation and adjudication proceedings, Freeport-McMoRan continues to not report water use information for its operations located within Arizona.

As a leading international mining company, our use of water is correlated to changes in mining production, which is generally tied to global economic activity. Our current mine plans are expected to require increased total water consumption as a result of incremental expansions at certain existing mines. Our 2013 business guidance included an estimated 1+ billion pounds per annum increase in our consolidated copper production volumes by 2016 through brownfield development projects at our Tenke Fungurume mine in Democratic Republic of Congo, our Morenci mine in Arizona, and our Cerro Verde mine near Arequipa, Peru. While we continue to maximize feasible water recycling rates with these expansions, we expect that our overall new or make-up water consumption will increase, with new water being a combination of groundwater, surface water, desalination water and municipal water/wastewater sources.

#### W0.2

### **Reporting Year**

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

# Period for which data is reported

Tue 01 Jan 2013 - Tue 31 Dec 2013

### W0.3

### **Reporting Boundary**

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

Companies, entities or groups over which financial control is exercised

### W0.4

#### **Exclusions**

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

Yes

# W0.2 W0.4a

### List of Exclusions

Please report the exclusions in the following table

Exclusion	Please explain why you have made the exclusion
Freeport-McMoRan Oil & Gas Inc. (business unit exclusion)	Freeport-McMoRan acquired Plains Exploration & Production Company on May 31, 2013 and McMoRan Exploration Company on June 3, 2013. These two recently acquired oil and gas companies have been formed into Freeport-McMoRan Oil & Gas, as a new, wholly owned subsidiary of Freeport-McMoRan. Due to the recent formation of this subsidiary, we have excluded this business unit.
Arizona operations (geographic exclusion from water use reporting)	Due to ongoing water rights litigation and adjudication proceedings, Freeport-McMoRan continues to not report water use information for its operations located within Arizona.

**Module: Current State** 

Page: W1. Context

# W1.1

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

Water quality and quantity	Importance rating	Please explain
Direct use: sufficient amounts of good quality freshwater available for use across your own operations	Vital for operations	Our mining operations require significant quantities of water for mining, ore processing and related support facilities. Most of our mining operations in North and South America are in areas where water is scarce and competition among users for continuing access to water is significant. Continuous production at our mines is dependent on our ability to maintain our water rights and claims, and the continuing physical availability of the water supplies.
Direct use: sufficient amounts of recycled, brackish and/or produced water available for use across your own operations	Vital for operations	In 2013, we used approximately 690 million cubic meters of water in our operating processes, of which approximately 69% was recycled water. Our overall water use, including recycled water, has remained relatively constant during the past five years, but we expect our absolute water use to increase in the future as we advance brownfield growth projects to increase copper production volumes.

Water quality and quantity	Importance rating	Please explain
Indirect use: sufficient amounts of good quality freshwater available for use across your value chain	Neutral	As a producer of raw materials, Freeport-McMoRan is at the bottom of the value chain. Exposure of our value chain to water related risks are uncertain and unquantifiable at this time. We are not aware that any of our key suppliers (major global companies) have water related risks that could materially impact our business. Through our Sustainable Development Risk Register process, we monitor the potential for risks in the value chain, including water-related risks if applicable.
Indirect use: sufficient amounts of recycled, brackish and/or produced water available for use across your value chain	Neutral	As a producer of raw materials, Freeport-McMoRan is at the bottom of the value chain. Exposure of our value chain to water related risks are uncertain and unquantifiable at this time. We are not aware that any of our key suppliers (major global companies) have water related risks that could materially impact our business. Through our Sustainable Development Risk Register process, we monitor the potential for risks in the value chain, including water-related risks if applicable.

#### W1.2

Have you evaluated how water quality and water quantity affects /could affect the success (viability, constraints) of your organization's growth strategy?

Other

#### W1.2a

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

Our mining operations require significant quantities of water for mining, ore processing and related support facilities. Most of our mining operations in North and South America are in areas where water is scarce and competition among users for continuing access to water is significant. Continuous production at our mines is dependent on our ability to maintain our water rights and claims, and the continuing physical availability of the water supplies. Our operations in water-stressed regions maintain water balances and are conducting scenario planning of potential events that could pose a risk to operations, including possible water supply reductions or storm events that produce excess water, either of which could potentially impact mine production. Through our Land and Water Department, we evaluate water supply development opportunities that can be used either to mitigate existing water-related risks or provide new water supplies to support potential future mine expansions at our operations. Our Sustainable Development Risk Register process facilitates identification of key risks and opportunities across the environment, social and economic spectrum at all operations. Through the Sustainable Development Risk Register process, both certainty of water supplies and management within our operations (including water quality) are identified as sustainability focus areas for our business (see the Freeport-McMoRan 2013 Working Toward Sustainable Development Report at www.fcx.com).

V	N	1	3
v	v		

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

No

**Module: Risk Assessment** 

Page: W2. Procedures and Requirements

#### W2.1

Please select the option that best describes your procedures with regard to assessing water risks and provide an explanation as to why this option is suitable for your organization

Other

#### W2.1a

You may provide additional information about your approach to assessing water risks here

Water is integrated into a comprehensive, company-wide risk assessment process incorporating both direct operations and our value chain (upstream supplier and downstream consumer influences). Our Sustainable Development (SD) Risk Register process facilitates identification of key risks & opportunities. Certainty of water supplies and management are identified as sustainability focus areas for our business and outlined in our 2013 Working Toward Sustainability Development Report (www.fcx.com). Availability of sufficient supplies is also disclosed as an operational risk factor in the Company's Form 10-K. Our mine sites in water-stressed regions also maintain water balance models to better understand water uses and to identify system losses within the operation.

# W2.2

# Please state how frequently you undertake water risk assessments, what geographical scale and how far into the future you consider

Frequency	Geographic scale	Timeframe
The Freeport-McMoRan Sustainable Development Risk Register program is an ongoing process designed for operations and the corporate office to identify key risks or opportunities at any given time.	Facility	Freeport-McMoRan is taking both a current and long- term view on securing water supplies that address changing water use patterns and changing opportunities for future sources of water.
The Company's operational risk factors are outlined in the Form 10-K on an annual basis.	Facility	Freeport-McMoRan is taking both a current and long- term view on securing water supplies that address changing water use patterns and changing opportunities for future sources of water.
Operations in water-stressed regions maintain water balances and are conducting scenario planning of potential events that could pose a risk to operations, including possible water supply reductions or storm events that produce excess water, either of which could potentially impact mine production. This is an ongoing process.	Facility	Freeport-McMoRan is taking both a current and long- term view on securing water supplies that address changing water use patterns and changing opportunities for future sources of water.

# W2.3

# Please state the methods used to assess water risks

# Method

Internal company knowledge

W2.4

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

Issues	Choose option	Please explain
Current water availability and quality parameters at a local level	Relevant, included	Our SD Risk Register process assists in prioritizing environmental, social and economic challenges and opportunities. Under this process, local cross-functional management teams utilize a matrix of consequence categories ranging from community or environmental impacts to reputational impacts. As our operations identify and track key actions and milestones toward reducing sustainability-related risks, this process enhances decision making regarding operational planning and resource allocation.
Current water regulatory frameworks and tariffs at a local level	Relevant, included	See explanation above regarding the Sustainable Development (SD) Risk Register process.
Current stakeholder conflicts concerning water resources at a local level	Relevant, included	See explanation above regarding the Sustainable Development (SD) Risk Register process.
Current implications of water on your key commodities/raw materials	Relevant, included	See explanation above regarding the Sustainable Development (SD) Risk Register process.
Current status of ecosystems and habitats at a local level	Relevant, included	See explanation above regarding the Sustainable Development (SD) Risk Register process.
Estimates of future changes in water availability at a local level	Relevant, included	Operations in water-stressed regions maintain water balances and are conducting scenario planning of potential events that could pose a risk to operations, including possible water supply reductions or storm events that produce excess water, either of which could potentially impact mine production.
Estimates of future potential regulatory changes at a local level	Relevant, included	See explanation above regarding the SD Risk Register process. Although each of our mining operations currently has access to sufficient water supplies to support current operational demands, some supplies are subject to unresolved claims by others through ongoing legal proceedings. We cannot predict the potential outcome of pending or future proceedings with respect to water rights.
Estimates of future potential stakeholder conflicts at a local level	Relevant, included	See explanation above regarding the SD Risk Register process. Although each of our mining operations currently has access to sufficient water supplies to support current operational demands, some supplies are subject to unresolved claims by others through ongoing legal proceedings. We cannot predict the potential outcome of pending or future proceedings with respect to water rights.
Estimates of future implications of water on your key commodities/raw materials	Relevant, included	See explanation above regarding the Sustainable Development (SD) Risk Register process.
Estimates of future potential changes in the status of ecosystems and habitats at a local level	Relevant, included	See explanation above regarding the Sustainable Development (SD)process. The process includes an assessment of potential risks or opportunities associated with biodiversity.
Scenario analysis of availability of sufficient quantity and quality of water relevant for your operations at a local	Relevant, included	See explanation above regarding the Sustainable Development Risk Register process. Operations in water-stressed regions maintain water balances and are conducting scenario planning of potential events that could pose a risk to operations, including possible water supply reductions or storm events

Issues	Choose option	Please explain
level		that produce excess water, either of which could potentially impact mine production.
Scenario analysis of regulatory and/or tariff changes at a local level	Relevant, included	See explanation above regarding the SD Risk Register process. Although each of our mining operations currently has access to sufficient water supplies to support current operational demands, some supplies are subject to unresolved claims by others through ongoing legal proceedings. We cannot predict the potential outcome of pending or future proceedings with respect to water rights.
Scenario analysis of stakeholder conflicts concerning water resources at a local level	Relevant, included	See explanation above regarding the SD Risk Register process. Although each of our mining operations currently has access to sufficient water supplies to support current operational demands, some supplies are subject to unresolved claims by others through ongoing legal proceedings. We cannot predict the potential outcome of pending or future proceedings with respect to water rights.
Scenario analysis of implications of water on your key commodities/raw materials	Relevant, included	See explanation above regarding the Sustainable Development (SD) Risk Register process.
Scenario analysis of potential changes in the status of ecosystems and habitats at a local level	Relevant, included	See explanation above regarding the SD Risk Register process. The process includes an assessment of potential risks or opportunities associated with biodiversity. Although each of our mining operations currently has access to sufficient water supplies to support current operational demands, some supplies are subject to unresolved claims by others through ongoing legal proceedings. We cannot predict the potential outcome of pending or future proceedings with respect to water rights.
Other		

# W2.4a

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

Stakeholder	Choose option	Please explain
Customers	Relevant, included	The SD Risk Register process assists in prioritizing environmental, social and economic challenges and opportunities. Through this process, we monitor the potential for risks in the value chain (upstream supplier and downstream customer influences), including water-related risks if applicable. Under this process, local cross-functional management teams utilize a matrix of consequence categories ranging from community or environmental impacts to reputational impacts.
Employees	Relevant, included	The Sustainable Development Risk Register process described above takes into consideration our employees. In addition, our employees conduct and maintain our assessments and resulting actions with respect to water.
Investors	Relevant, included	Our corporate Sustainable Development department engages frequently with the socially responsible investment community, including dialogue on our water programs and projects. Viewpoints and suggestions are considered on an ongoing basis including directly into our Sustainable Development Risk Register process. The feedback we receive is important to continually improve our reporting on sustainability programs, including our work with respect to water.

Stakeholder	Choose option	Please explain
Local communities	Relevant, included	Communities are often primary stakeholders whose input we evaluate in our SD Risk Register process at the local level. For example, our Cerro Verde operation is constructing a wastewater treatment plant for Arequipa, Peru as it progresses its large-scale expansion, and obtained authorization to reuse an annual average of one cubic meter per second of the treated water. Through local stakeholder engagement, the outcome has been a "win-win" for the local community, host government & Cerro Verde.
NGOs	Relevant, included	The Sustainable Development Risk Register process described above takes into consideration the views of NGOs and certain NGOs work with respect to water management.
Other water users at a local level	Relevant, included	The Sustainable Development Risk Register process described above is designed to evaluate views and plans of any stakeholder group, as applicable, including other municipal and agricultural water users.
Regulators at a local level	Relevant, included	The Sustainable Development Risk Register process described above is designed to evaluate potential risks associated with compliance, including legal or compliance related risks associated with water. As such, regulators are factored into assessments. Our company also routinely engages with public policy makers and local/regional stakeholders.
Statutory special interest groups at a local level	Relevant, included	Local stakeholders are often primary stakeholders whose input and views we evaluate in our Sustainable Development Risk Register process at the local operating level.
Suppliers	Relevant, included	The Sustainable Development Risk Register process assists in prioritizing environmental, social and economic challenges and opportunities. Through this process, we monitor the potential for risks in the value chain (upstream supplier and downstream customer influences), including water-related risks if applicable.
Water utilities/suppliers at a local level	Relevant, included	See explanation above regarding the SD Risk Register process.
Other		

# W2.5

Do you require your key suppliers to report on their water use, risks and management?

No

#### W2.5b

Please choose the option that best explains why you do not require your key suppliers to report on their water use, risks and management

Primary reason	Please explain
Other:	Supply chain exposure to water-related risks may include changes in precipitation patterns/sea levels/storm patterns/storm intensities, water shortages & new or modified regulations. Specific, potential impacts are uncertain & unquantifiable at this time. We are not aware that any of our key suppliers (major global corporations) have water-related risks that could materially impact our business. Our SD Risk Register process monitors the potential for water-related risks in our supply chain.

**Module: Implications** 

Page: W3. Water Risks

#### W3.1

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

Yes, direct operations only

#### W3.2

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

A substantive risk could include, but may not be limited to, a curtailment or disruption of mine production, prevention of mine expansion opportunities, increased capital expenditure and operational maintenance costs associated with development of alternate and renewable water supplies, or increased capital expenditures and increased operating costs associated with water quality programs and technologies.

# W3.2a

Please complete the table below providing information as to the number of facilities in your direct operations exposed to water risks that could generate a substantive change in your business, operations, revenue or expenditure. Please also provide either the proportion of cost of goods sold, global revenue or global production capacity that could be affected across your entire organization at the river basin level

Country	River basin	Number of facilities within the river basin exposed to water risk	Reporting metric	Proportion of chosen metric that could be affected within the river basin
United States of America	Other: Colorado River (AZ, CO, NM)	9	% global production capacity	31-40
Chile	Other: Rio Copiapo (Candelaria); Ascotan salt flat drainage basin (El Abra)	2	% global production capacity	11-20
Peru	Other: Rio Chili	1	% global production capacity	11-20
Indonesia	Other: Ajkwa	1	% global production capacity	21-30

# W3.2b

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

Country	United States of America	
River basin	Other: Colorado River (AZ, CO)	
Risk driver	Regulatory-Regulatory uncertainty	
Potential impact	Other: see description of impact	
Description of impact	In the arid western U.S. water rights are often contested, and disputes are generally time-consuming, expensive and not necessarily dispositive unless they resolve both actual and potential claims. The loss of a water right or a continued use of a currently available water supply, or the inability to expand our water resources could materially and adversely affect our mining operations by increasing costs, forcing us to curtail operations, prevent expansions or forcing premature closures.	
Timeframe	Unknown	
Likelihood	Unknown	
Magnitude of potential financial impact	Unknown	
Response strategy	Other: see details of strategy	
Costs of response strategy	Unknown	
Details of strategy and costs	In response to this risk, our company continues to explore opportunities to augment existing water supplies. Mining sites in water-stressed regions also maintain water balance models to better understand water uses and to identify losses within the operation. The company also remains an active participant in ongoing water right adjudication proceedings in and in litigation over federal reserved water right claims, both of which are currently ongoing in Arizona.	

Country	United States of America			
River basin	Other: Colorado River (AZ, CO & NM)			
Risk driver	Physical-Increased water scarcity			
Potential impact	Other: see description of impact			
Description of impact	Our operations in the western U.S. require significant quantities of water. The loss of a water right or a continued use of a currently available water supply, or the inability to expand our water resources could materially and adversely affect our mining operations by increasing costs, forcing us to curtail operations, prevent expansions or forcing premature closures.			
Timeframe	Unknown			
Likelihood	Unknown			
Magnitude of potential financial Unknown				
Response strategy	Other: see details of strategy			
Costs of response strategy	Unknown			
Details of strategy and costs	In response to this risk, our company continues to explore opportunities to augment existing water supplies. Mining sites in water-stressed regions also maintain water balance models to better understand water uses and to identify losses within the operation.			

Country	United States of America			
River basin	Other: Colorado River (AZ, CO & NM)			
Risk driver	Regulatory-Statutory water withdrawal limits/changes to water allocation			
Potential impact	Other: see description of impact			
Description of impact	In the arid western U.S. water rights are often contested, and disputes are generally time-consuming, expensive are not necessarily dispositive unless they resolve both actual and potential claims. The loss of a water right or a continued use of a currently available water supply, or the inability to expand our water resources could materially and adversely affect our mining operations by increasing costs, forcing us to curtail operations, prevent expansions or forcing premature closures.			
Timeframe	Unknown			
Likelihood	Unknown			
Magnitude of potential financial unknown				
Response strategy	Other: see details of strategy			
Costs of response strategy	Unknown			
Details of strategy and costs	In response to this risk, our company continues to explore opportunities to augment existing water supplies. Mining sites in water-stressed regions also maintain water balance models to better understand water uses and to identify losses within the operation.			

Country	Chile			
River basin	Other: Ascotan salt flat drainage basin (El Abra)			
Risk driver	Physical-Increased water scarcity			
Potential impact	Other: see description of impact			
Description of impact	Curtailed mine production and prevention of mine expansion opportunities, increased capital expenditures and operational maintenance costs associated with the development of alternate, renewable water supplies.			
Timeframe	Unknown			
Likelihood	Unknown			
Magnitude of potential financial impact	Unknown			
Response strategy	Other: see details of strategy			
Costs of response strategy	Unknown			
Details of strategy and costs	El Abra has sufficient water rights to support current operations, but a change to the project such as increased production or mill processing, would require additional water beyond our current groundwater pumping. In response, El Abra is studying the feasibility of constructing a seawater desalination plant to support possible increased sulfide ore production or mill processing.			

Country	Chile			
River basin	Other: Rio Copiapo Candelaria); Ascotan salt flat drainage basin (El Abra)			
Risk driver	Regulatory-Regulatory uncertainty			
Potential impact	Other: see description of impact			
Description of impact	The loss of a water right or a continued use of a currently available water supply, or the inability to expand our water resources could materially and adversely affect our mining operations by increasing costs, forcing us to curtail operations, prevent expansions or forcing premature closures.			
Timeframe	Unknown			
Likelihood	Unknown			
Magnitude of potential financial impact	Unknown			
Response strategy	Other: see details of strategy			
Costs of response strategy	High			
Near Copiapo, Chile, we have constructed a desalination plant that, together with effluent from a variety treatment plant, substantially reduces the need to withdraw water from a local aquifer for Candela Importantly, this project strategy has afforded the opportunity to transfer potable water rights to the for residential uses. Our El Abra operation near Calama, Chile also is conducting studies to assess constructing a desalination plant to treat seawater for potential use for sulfide ore production or m				

Country	Chile			
River basin	Other: Rio Copiapo Candelaria); Ascotan salt flat drainage basin (El Abra)			
Risk driver	Regulatory-Statutory water withdrawal limits/changes to water allocation			
Potential impact	Other: see description of impact			
Description of impact	The loss of a water right or a continued use of a currently available water supply, or the inability to expand our water resources could materially and adversely affect our mining operations by increasing costs, forcing us to curtail operations, prevent expansions or forcing premature closures.			
Timeframe	Unknown			
Likelihood	Unknown			
Magnitude of potential financial impact	Unknown			
Response strategy	Other: see details of strategy			
Costs of response strategy	High			
Details of strategy and costs	Near Copiapo, Chile, we have constructed a desalination plant that, together with effluent from a wastewater treatment plant, substantially reduces the need to withdraw water from a local aquifer for Candelaria's operation Importantly, this project strategy has afforded the opportunity to transfer potable water rights to the local water for residential uses. Our El Abra operation near Calama, Chile also is conducting studies to assess the feasible constructing a desalination plant to treat seawater for potential use for sulfide ore production or mill processing			

Country	United States of America			
River basin	Other: multiple river basins			
Risk driver	Physical-Flooding			
Potential impact	Other: see description of impact			
Description of impact	Potential interruptions to business operations and potential safety hazard.			
Timeframe	Unknown			
Likelihood	Unknown			
Magnitude of potential financial impact	Unknown			
Response strategy	Other: see details of strategy			
Costs of response strategy	Unknown			
Details of strategy and costs	While overall rainfall events can be infrequent and short-term in nature, large volumes of water can accumulate from isolated heavy rainfall events. Business interruption can also stem from higher intensity, short duration storms. These isolated events can produce negative, but generally non-material, effects on mining and production rates. Evaporation and other water management activities have been developed to varying degrees at these sites to help reduce the volume of captured stormwater.			

Country	Indonesia			
River basin	Other: Ajkwa			
Risk driver	Physical-Flooding Physical-Flooding			
Potential impact	Other: see description of impact			
Description of impact	Potential interruptions to business operations and potential safety hazard.			
Timeframe	Unknown			
Likelihood	Unknown			
Magnitude of potential financial impact	Unknown			
Response strategy	Other: see details of strategy			
Costs of response strategy	Unknown			
Details of strategy and costs	The Grasberg mine is located in steep, mountainous terrain that experiences average annual rainfall of approximately 200 inches, leading to periodic mudslides.			

Country	United States of America			
River basin	Other: Colorado (AZ)			
Risk driver	Reputational-Litigation			
Potential impact	Other: see description of impact			
Description of impact	In the arid western U.S. water rights are often contested, and disputes are generally time-consuming, expensive and not necessarily dispositive unless they resolve both actual and potential claims. The loss of a water right or a continued use of a currently available water supply, or the inability to expand our water resources could materially and adversely affect our mining operations by increasing costs, forcing us to curtail operations, prevent expansions or forcing premature closures.			
Timeframe	Unknown			
Likelihood	Unknown			
Magnitude of potential financial impact	Unknown			
Response strategy	Other: see details of strategy			
Costs of response strategy	Unknown			
Details of strategy and costs	n Arizona, we are a participant in two active general stream adjudications in which, for over 30 years, the Arizona courts have been attempting to quantify and prioritize surface water claims for two of the state's largest river systems, which affect our operating mines at Morenci, Safford, Sierrita and Miami. Litigation results could be material to the company as described in our 2013 Form 10-K, Part I, Item 3 (Legal Proceedings), page 66-68.			

#### W3.2e

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

Primary reason	Please explain				
Risks exist, but no substantive impact anticipated	Our supply chain exposure to water related risks may include changes in precipitation patterns/sea levels/storm patterns/storm intensities, water shortages & new or modified regulations. Specific potential impacts are uncertain & unquantifiable at this time, but we are not aware that any of our key suppliers (major global corporations) have water-related risks that could materially impact our business. Our SD Risk Register process monitors for potential water related risks in our supply chain.				

# Page: W4. Water Opportunities

#### W4.1

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

Yes

### W4.1a

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

Country or region	Opportunity	Strategy to realize opportunity	Estimated timeframe	Please explain
Chile	Other: Community benefit	Development of a sustainable, long-term water supply for our Candelaria mine.	Current-up to 1 year	At our Candelaria operation, the development of desalination plant water and acquisition of effluent from a local wastewater treatment plant has afforded the opportunity to transfer potable water rights to the local water utility for residential uses.
Peru	Other:	Construction of a local wastewater	1-3 years	Our Cerro Verde operation, as part of a large-scale mine expansion, is

Country or region	Opportunity	Strategy to realize opportunity	Estimated timeframe	Please explain
	Community benefit	treatment plant to supplement existing water supplies for operations while benefitting the local community of Arequipa, Peru.		constructing a wastewater treatment plant for the city of Arequipa, Peru. This plant improves regional water quality, reduces waterborne illnesses and enhances the value of local agricultural products while providing water for this operational expansion. Cerro Verde also funded the development of an expandable water treatment facility which now provides local residents 24-hour access to potable water.

**Module: Accounting** 

Page: W5. Water Accounting (I)

W5.1

Please report the total withdrawal, discharge, consumption and recycled water volumes across your operations for the reporting period

Water use	Quantity (megaliters)
Total volume of water withdrawn	214200
Total volume of water discharged	110000
Total volume of water consumed	689000
Total volume of recycled water used	474800

### W5.2

For those facilities exposed to water risks that could generate a substantive change in your business, operations, revenue or expenditure, the number of which was reported in W3.2a, please detail which of the following water aspects are regularly measured and monitored and an explanation as to why or why not

Water aspect	% of facilities	Please explain
Water withdrawals- total volumes	76-100	This data is collected and reported annually.
Water withdrawals- volume by sources	76-100	This data is collected and reported annually.
Water discharges- total volumes	76-100	This data is collected and reported annually.
Water discharges- volume by destination	76-100	This data is collected and reported annually.
Water discharges- volume by treatment method	76-100	This data is collected and reported annually.
Water discharge quality data- quality by standard effluent parameters	76-100	This data is collected and reported annually.
Water consumption- total volume	76-100	This data is collected and reported annually.
Water recycling/reuse-total volume	76-100	This data is collected and reported annually.

### W5.3

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

Facility reference number	Country	River basin	Facility name	Total water withdrawals (megaliters/year) at this facility	How does the total water withdrawals at this facility compare to the last reporting period?	Please explain the change if substantial
Facility 1	United States of America	Other: multiple river basins	includes all Colorado and New Mexico mine operations but excludes all Arizona mine operations due to ongoing water right adjudication proceedings	42300	Higher	
Facility 2	Indonesia	Other: Ajkwa	Grasberg mine	61300	Higher	

Facility reference number	Country	River basin	Facility name	Total water withdrawals (megaliters/year) at this facility	How does the total water withdrawals at this facility compare to the last reporting period?	Please explain the change if substantial
Facility 3	Chile	Other: Rio Copiapo (Candelaria); Ascotan salt flat drainage basin (El Abra)	includes Candelaria, El Abra and Ojos del Salado mine operations	24800	Higher	
Facility 4	Peru	Other: Rio Chili (Cerro Verde)	Cerro Verde mine	20200	Lower	
Facility 5	Congo, Democratic Republic of the	Congo	Tenke Fungurume mine	12900	Lower	
Facility 6	Spain	Other: Odiel	Atlantic Copper smelter and refinery	49400	Lower	All water withdrawn at Atlantic Copper is returned to the Odiel River (once-through cooling)
Facility 7	Finland	Other: Perhonjoki	Kokkola	3100	This is our first year of estimation	This is the first year Kokkola is included in reporting
Facility 8	Netherlands	Rhine	Rotterdam	140	About the same	
Facility 9	United Kingdom	Other: Gipping	Stowmarket	10	About the same	

# **Further Information**

Water quantities displayed in W5.1 and W5.3 are rounded to the nearest 100 megaliters for all quantities above 1,000 megaliters and to the nearest 10 megaliters for all volumes below 1,000 megaliters.

# Page: W5. Water Accounting (II)

### W5.3a

Water withdrawals: for the reporting period, please provide withdrawal data, in megaliters per year, for the water sources used for all facilities reported in W5.3

Facility reference number	Surface water	Groundwater (renewable)	Groundwater (non- renewable)	Municipal water	Recycled water	Produced/process water	Wastewater	Brackish/salt water
Facility 1	22200	19400		100	131600		650	
Facility 2	34600	26800			64900			
Facility 3	360	10600		50	183100		4100	9600
Facility 4	18600	1600			69600			
Facility 5	10500	2400		30	6700			
Facility 6	49400			40	2900			
Facility 7	3100				12500			
Facility 8				140	3500			
Facility 9				10				

### W5.4

Water discharge: for the reporting period, please provide the water accounting data for all facilities reported in W5.3

Facility reference number	Total water discharged (megaliters/year) at this facility	How does the total water discharged at this facility compare to the last reporting period?	Please explain the change if substantive
Facility 1	9600	includes all Colorado and New Mexico mine operations but excludes all Arizo operations due to ongoing water rights adjudication proceedings. Increase produce to full year of operation at the Climax Mine.	
Facility 2	46000	About the same	
Facility 3	6000	This is our first year of estimation	desalination brine
Facility 4	0	About the same	

Facility reference number	Total water discharged (megaliters/year) at this facility	How does the total water discharged at this facility compare to the last reporting period?	Please explain the change if substantive
Facility 5	0	About the same	
Facility 6	50000	About the same	
Facility 7	0	About the same	
Facility 8	0	About the same	
Facility 9	0	About the same	

# W5.4a

Water discharge: for the reporting period, please provide water discharge data, in megaliters per year, by destination for all facilities reported in W5.3

Facility reference number	Surface water	Municipal Treatment Plant	Saltwater	Injection for production/disposal	Aquifer recharge	Storage/waste lagoon
Facility 1	9600					
Facility 2	46000					
Facility 3			6000			
Facility 4						
Facility 5						
Facility 6	50000					
Facility 7						
Facility 8						
Facility 9						

Water consumption: for the reporting period, please provide water consumption data for all facilities reported in W5.3

W5.5

Facility reference number	Consumption (megaliters/year)	How does this compare to the last reporting period?	Please explain the change if substantive
Facility 1	174000	About the same	Includes all Colorado and New Mexico mine operations but excludes all Arizona mine operations due to ongoing water rights adjudication proceedings; consumption volume reported included recycled water
Facility 2	126200	About the same	Consumption volume reported included recycled water
Facility 3	207900	About the same	Consumption volume reported included recycled water
Facility 4	89700	About the same	Consumption volume reported included recycled water
Facility 5	19700	Higher	Consumption volume reported included recycled water. Increase due to increase in production in 2013.
Facility 6	52400	Lower	Consumption volume reported included recycled water. Decrease due to smelter shutdown in 2013.
Facility 7	15600	This is our first year of estimation	Consumption volume reported included recycled water
Facility 8	3600	About the same	Consumption volume reported included recycled water
Facility 9	10	About the same	Consumption volume reported included recycled water

For the reporting period, please provide any available water intensity values for your organization's products or services across its operation

W5.6

Country	River basin	Product name	Product unit	Water unit	Water intensity (Water unit/Product unit)	Water use type	Comment
United States of America	Other: Colorado (CO and NM), other river basins (CO and NM), internal drainage basins (NM)	Copper equivalents	Other: metric tons	Megaliters	0.75	Water use in operations	Water use volumes for these intensity calculations include recycled water. Water use at processing facilities is excluded as we are using copper equivalent production from mines for this calculation. The copper production and water use information does not include our Arizona operations due to ongoing water rights adjudication.
Indonesia	Other: Ajkwa	Copper equivalents	Other: metric tons	Megaliters	0.19	Water use in operations	Water use volumes for these intensity calculations include recycled water.
Chile	Other: Rio Copiapo and Ascotan salt flat drainage basin	Copper equivalents	Other: metric tons	Megaliters	0.56	Water use in operations	Water use volumes for these intensity calculations include recycled water.
Peru	Other: Rio Chili	Copper equivalents	Other: metric tons	Megaliters	0.32	Water use in operations	Water use volumes for these intensity calculations include recycled water.
Congo, Democratic Republic of the	Congo	Copper equivalents	Other: metric tons	Megaliters	0.07	Water use in operations	Our Tenke Fungurume operation has copper ore grades that are significantly higher than our other operations, which contributes to a low water use per unit of material processed.

W5.7

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

Water aspect	% verification	What standard was used?
Water withdrawals- total volumes	Not verified	Our water data is aggregated to the Freeport-McMoRan level (company-wide) in our 2013 Working Toward Sustainable Development (WTSD) Report. The 2013 WTSD Report has been prepared at the A+ level of the GRI G3 guidelines, including third-party assurance. The assurance statement for our 2013 WTSD Report can be found at www.fcx.com.
Water withdrawals- volume by sources	Not verified	Our water data is aggregated to the Freeport-McMoRan level (company-wide) in our 2013 Working Toward Sustainable Development (WTSD) Report. The 2013 WTSD Report has been prepared at the A+ level of the GRI G3 guidelines, including third-party assurance. The assurance statement for our 2013 WTSD Report can be found at www.fcx.com.
Water discharges- total volumes	Not verified	Our water data is aggregated to the Freeport-McMoRan level (company-wide) in our 2013 Working Toward Sustainable Development (WTSD) Report. The 2013 WTSD Report has been prepared at the A+ level of the GRI G3 guidelines, including third-party assurance. The assurance statement for our 2013 WTSD Report can be found at www.fcx.com.
Water discharges- volume by destination	Not verified	Our water data is aggregated to the Freeport-McMoRan level (company-wide) in our 2013 Working Toward Sustainable Development (WTSD) Report. The 2013 WTSD Report has been prepared at the A+ level of the GRI G3 guidelines, including third-party assurance. The assurance statement for our 2013 WTSD Report can be found at www.fcx.com. Our water discharges generally report to either a surface water stream or the ocean.
Water discharges- volume by treatment method	Not verified	Our water data is aggregated to the Freeport-McMoRan level (company-wide) in our 2013 Working Toward Sustainable Development (WTSD) Report. The 2013 WTSD Report has been prepared at the A+ level of the GRI G3 guidelines, including third-party assurance. The assurance statement for our 2013 WTSD Report can be found at www.fcx.com. Our treatment methods are either high density sludge or sulfide additions.
Water discharge quality data- quality by standard effluent parameters	Not verified	Our water data is aggregated to the Freeport-McMoRan level (company-wide) in our 2013 Working Toward Sustainable Development (WTSD) Report. The 2013 WTSD Report has been prepared at the A+ level of the GRI G3 guidelines, including third-party assurance. The assurance statement for our 2013 WTSD Report can be found at www.fcx.com. We meet the discharge permit requirements stipulated in our facility environmental permits.
Water consumption- total volume	Not verified	Our water data is aggregated to the Freeport-McMoRan level (company-wide) in our 2013 Working Toward Sustainable Development (WTSD) Report. The 2013 WTSD Report has been prepared at the A+ level of the GRI G3 guidelines, including third-party assurance. The assurance statement for our 2013 WTSD Report can be found at www.fcx.com.
Water recycling/reuse-total volume	Not verified	Our water data is aggregated to the Freeport-McMoRan level (company-wide) in our 2013 Working Toward Sustainable Development (WTSD) Report. The 2013 WTSD Report has been prepared at the A+ level of the GRI G3 guidelines, including third-party assurance. The assurance statement for our 2013 WTSD Report can be found at www.fcx.com.

#### **Further Information**

For clarification on our response to question W.5.3a, we have incorporated our reported stormwater (rainwater) withdrawals into our reported surface water withdrawals because the CDP removed the stormwater (rainwater) water source category that was provided in previous annual CDP water questionnaires. Also, water quantities displayed in W5.3a, W5.4, W5.4a and W5.5 are rounded to the nearest 100 megaliters for all quantities above 1,000 megaliters and to the nearest 10 megaliters for all volumes below 1,000 megaliters.

**Module: Response** 

Page: W6. Governance and Strategy

W6.1

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

Highest level of direct responsibility for water issues	Frequency of briefings on water issues	Comment		
Individual/Sub-set of the Board or other committee appointed by the Board	Other: Regular updates to the Board of Directors	The Freeport-McMoRan Board of Directors as a whole is responsible for risk oversight, with reviews of certain areas being conducted by the relevant board committees that report to the full Board. The Corporate Responsibility Committee assists the board in fulfilling its oversight responsibilities with respect to the management of risks associated with our environmental policy/implementation and sustainable development programs. The committee regularly reports on these matters to the full board.		

W6.2

Is water management integrated into your business strategy?

Yes

# W6.2a

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

Influence of water on business strategy	Please explain
Other: Community investments and partnerships	In 2013, we maintained a significant level of community development investments, in alignment with the needs and goals of local stakeholders. Water quality and security of supply, for example, is a centerpiece of Cerro Verde's large-scale brownfield expansion project in a water-scarce region of Peru. The operation is advancing construction of a wastewater treatment plant to improve water quality for the city of Arequipa while providing renewable water for an economically significant project.
Other: Community partnerships	Leases of unused water rights to other entities allows Freeport-McMoRan to protect its water rights from forfeiture or abandonment claims, while making water available to other entities. Several operations in both Arizona and New Mexico lease irrigated land with appurtenant water rights to local farmers and ranchers when this water is not required for current mine operations. These leases protect the Company's water rights and also support the local communities in which we operate.

### W6.2b

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

Influence of water on business strategy	Please explain	
Increased capital expenditure	Acquisition of additional water rights and water resources, in response to identified physical and legal risks, will likely require significant capital expenditures and other operating, maintenance and legal expenses.	

# W6.3

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

Other: Company-wide qualitative goals

# W6.4

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

Water-related spending: % of total CAPEX during this reporting period compared to last reporting period	Water-related spending: % of total OPEX during this reporting period compared to last reporting period	Motivation for these changes	
		Water-related capital spending is episodic and is based upon the needs of the Company at the time. Water-related operating costs are generally consistent over time, although they can incrementally increase with each new water supply resource. For example, water-related OPEX increased with the Candelaria desalination plant, then remained consistent over time, and will increase again when the Cerro Verde wastewater treatment plant comes online.	

# Page: W7. Compliance

### W7.1

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

Yes, not significant

#### W7.1a

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

Facility name	Incident description	Financial penalty or fine	Currency	Incident resolution
Kinetics Climax, Inc. (manufacturing facility located in Wilsonville, Oregon)	The facility received a Notice of Assessment of Civil Penalty from the Oregon Department of Environmental Quality (ODEQ) for failure to collect monitoring data required in a general stormwater permit. There was no environmental impact.	4762	USD(\$)	Kinetics Climax resolved the matter by paying the fine, successfully demonstrating to ODEQ that the facility should not be subject to stormwater discharge permit requirements and the permit was terminated.

### W7.1b

Please indicate the total of all penalties and/or fines for breaches of abstraction licenses, discharge consents or other water and wastewater related regulations as a percentage of total operating expenditure (OPEX) compared to last year

About the same

### **Further Information**

The total expenditure is insignificant to our water-related OPEX.

# Page: W8. Targets and Initiatives

### W8.1

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

Yes, goals only

### W8.1b

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

Goal	Motivation	Description of goal	Progress
Other: Water supply management	Water stewardship	Operations are prioritized using the Sustainable Development Risk Register process to implement a water management/conservation plan.	Water balance models are maintained at all operations in water-stressed regions. These operations also utilize a common format for water management plans, including scenario planning.
Other: Water supply development	Water stewardship	The Company is taking a long-term view on securing water supplies that address changing user patterns and changing opportunities for future sources of water.	This is an ongoing process that undergoes detailed management review on a case-by-case basis as potential water development opportunities are identified or become available.

**Module: Sign Off** 

Page: Sign Off

### W9.1

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

Name	Job title	Corresponding job category
William Cobb	Vice President of Environmental Services and Sustainable Development	Other: Senior manager/officer