

2018
SUSTAINABILITY
DISCLOSURE
& GRI INDEX



GRI Content Index

GENERAL DISCLOSURES

STANDARD TITLE	GENERAL DISCLOSURE	PAGE (OR LINK)	EXTERNAL ASSURANCE	DISCLOSURE
GRI 101: FOUNDATION 2016				

Organizational Profile

GRI 102: General Disclosures 2016	102-1	The Mosaic Company	-	Name of the organization
	102-2	PDF pg. 15	-	Primary brands, products, and services
	102-3	Plymouth, Minnesota	-	Location of the organization's headquarters
	102-4	Form 10-K pg. F-45 and PDF pg. 16	-	Number of countries where the organization operates, and names of countries where either the organization has significant operations or that are specifically relevant to the sustainability topics covered in the report
	102-5	Form 10-K pg. 1	-	Nature of ownership and legal form
	102-6	Form 10-K pgs. 1-2	-	Markets served
	102-7	Form 10-K pgs. 17-23, F-2 For a list of our locations (64 as of the date of this report), please see our website .	-	Scale of the organization
	102-8	PDF pg. 16	-	Number of employees
	102-9	Form 10-K pgs. 22-24, Mine-to-Market Value and PDF pg. 17	-	Description of the organization's supply chain
	102-10	PDF pg. 18	-	Significant changes during the reporting period regarding the organization's size, structure, ownership, or its supply chain
	102-11	Mosaic addresses the precautionary principle through the organization's management of risk. Please see our Proxy Statement , pg. 10 for more information. In 2013, Mosaic submitted our first United Nations Global Compact (UNGC) Communication on Progress, affirming our commitment to operate according to the UNGC's 10 universal principles, including Principle Seven, which states, "Businesses should support a precautionary approach to environmental challenges."	-	How the precautionary approach or principle is addressed by the organization
	102-12	PDF pg. 18	-	Externally developed economic, environmental and social charters, principles, or other initiatives to which the organization subscribes or which it endorses
	102-13	PDF pgs. 18-19	-	Memberships of associations (such as industry associations) and national or international advocacy organizations

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Strategy

GRI 102: General Disclosures 2016	102-14	CEO Message	-	CEO Message
	102-15	Factors affecting our market, including impacts and risks, are summarized within Mosaic's Form 10-K , pg. 27. Key opportunities are discussed in our 2018 CDP Climate Change Response , pg. 15, and Form 10-K .	-	Key impacts, risks, and opportunities

Ethics and Integrity

GRI 102: General Disclosures 2016	102-16	PDF pg. 20	-	Organization's values, principles, standards and norms of behavior such as codes of conduct and codes of ethics
	102-17	PDF pg. 20	-	Mechanisms for advice and concerns about ethics

Governance

GRI 102: General Disclosures 2016	102-18	Proxy Statement, pg. 10	-	Governance structure of the organization
	102-20	Environmental, Health, Safety and Sustainable Development Committee Charter, pg. 2 and PDF pg. 20		Whether the organization has an executive-level position with responsibility for economic, environmental and social topics, and whether post holder report directly to the highest governance body
	102-21	Communications with the Board of Directors Policy		Process for consultation between stakeholders and the Board of Directors
	102-22	Proxy Statement, pgs. 22-25		Composition of Board of Directors and its committees
	102-23	Robert L. Lumpkins is the chair of our Board of Directors. He is an independent director and not an executive officer of the company. This information is accurate as of December 31, 2017. Proxy Statement , pg. 25		Chair of highest governance body
	102-24	Proxy Statement, pg. 10		Nomination and selection processes for the Board of Directors and its committees
	102-25	Proxy Statement, pg. 20		Processes for the Board of Directors to avoid conflicts of interest
	102-28	Proxy Statement, pg. 26		Processes for evaluating the Board's performance
	102-29	Proxy Statement, pg. 21		The Board's role in identification and management of impacts, risks and opportunities
	102-31	2018 CDP Climate Change Response, pg. 5		Frequency of the Board's review of economic, environmental and social impacts, risks, and opportunities
	102-33	Communications with the Board of Directors Policy		Process for communicating critical concerns to the Board of Directors.
	102-35	Proxy Statement, pg. 28		Compensation policies for the Board and Senior Leadership Team
	102-37	Communications with the Board of Directors Policy		Process for considering stakeholder views on compensation policies

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Stakeholder Engagement

GRI 102: General Disclosures 2016	102-40	PDF pg. 20	+/ Assurance Statement	List of stakeholder groups engaged by the organization
	102-41	PDF pg. 22	-	Percentage of total employees covered by collective bargaining agreements
	102-42	PDF pg. 20	+/ Assurance Statement	Basis for identification and selection of stakeholders with whom to engage
	102-43	PDF pg. 20	+/ Assurance Statement	Organization's approach to stakeholder engagement
	102-44	PDF pgs. 20-21	+/ Assurance Statement	Key topics and concerns that have been raised through stakeholder engagement

Reporting Practice

GRI 102: General Disclosures 2016	102-45	Form 10-K and PDF pg. 24	-	Entities included in the organization's consolidated financial statements or equivalent documents
	102-46	PDF pg. 22	+/ Assurance Statement	The process for defining the report content and the Aspect Boundaries
	102-47	PDF pg. 22	+/ Assurance Statement	Material Aspects identified in the process for defining report content
	102-48	PDF pg. 24	-	Restatements of information
	102-49	PDF pg. 24	-	Significant changes from previous reporting periods in the Scope and Aspect Boundaries
	102-50	January 1, 2018 – December 31, 2018	-	Reporting period
	102-51	June 2017	-	Date of most recent previous report
	102-52	Annual	-	Reporting cycle
	102-53	Benjamin Pratt, Vice President, Corporate Public Affairs	-	Contact point for questions regarding the report or its contents
	102-54	This report has been prepared in accordance with the GRI Standards: core option. External assurance, where available, is noted in this Content Index. PDF pg. 24	-	Claims of reporting in accordance with the GRI standards
	102-56	Our Responsibility – Reporting Leadership and Awards and PDF pg. 24	-	External assurance policy

Material Topic Reporting

GRI 103: Management Approach 2016	103-1	PDF pg. 22 The remainder of management approach (MA) for each material topic is included within the respective topic section.	+/ Assurance Statement	Explanation of material topic and its boundary
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Category: Economic

MATERIAL TOPIC: ECONOMIC PERFORMANCE

GRI 103: Management Approach 2016	103-1			+Assurance Statement	Explanation of material topic and its boundary		
	103-2	PDF pg. 22		+Assurance Statement	Management approach and its components		
	103-3			+Assurance Statement	Evaluation of management approach		
GRI 201: Economic Performance 2016	201-1	PDF pgs. 26-27		-	Direct economic value generated and distributed		EM0302-22
	201-2	PDF pg. 28		-	Financial implications and other risks and opportunities for the organization's activities due to climate change		
	201-3	Form 10-K pg. F-75 and PDF pgs. 28-29		-	Coverage of the organization's defined benefit plan obligations		
	201-4	PDF pg. 29		-	Financial assistance received from government		

MATERIAL TOPIC: MARKET PRESENCE

GRI 103: Management Approach 2016	103-1			+Assurance Statement	Explanation of material topic and its boundary		
	103-2	PDF pg. 22		+Assurance Statement	Management approach and its components		
	103-3			+Assurance Statement	Evaluation of management approach		
GRI 202: Market Presence 2016	202-1	PDF pgs. 30-31		-	Ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation		
	202-2	PDF pg. 31		-	Proportion of senior management hired from the local community at significant locations of operation		

MATERIAL TOPIC: INDIRECT ECONOMIC IMPACTS

GRI 103: Management Approach 2016	103-1			+Assurance Statement	Explanation of material topic and its boundary		
	103-2	PDF pg. 22		+Assurance Statement	Management approach and its components		
	103-3			+Assurance Statement	Evaluation of management approach		
GRI 203: Indirect Economic Impacts 2016	203-1	PDF pgs. 31-32		-	Development and impact of infrastructure investments and services supported		
	203-2	PDF pg. 32-33		-	Significant indirect economic impacts, including the extent of impacts		

MATERIAL TOPIC: PROCUREMENT PRACTICES

GRI 103: Management Approach 2016	103-1			+Assurance Statement	Explanation of material topic and its boundary		
	103-2	PDF pg. 22		+Assurance Statement	Management approach and its components		
	103-3			+Assurance Statement	Evaluation of management approach		
GRI 204: Procurement Practices 2016	204-1	PDF pg. 33		-	Proportion of spending on local suppliers at significant locations of operation		

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Category: Economic (continued)

MATERIAL TOPIC: ANTI-CORRUPTION

GRI 103: Management Approach 2016	103-1	PDF pg. 22		+Assurance Statement	Explanation of material topic and its boundary		
	103-2			+Assurance Statement	Management approach and its components		
	103-3			+Assurance Statement	Evaluation of management approach		
GRI 205: Anti-Corruption 2016	205-1	PDF pg. 34		-	Total number and percentage of operations assessed for risks related to corruption and the significant risks identified	10	EM0302-22
	205-2	PDF pg. 35		-	Communication and training on anti-corruption policies and procedures	10	
	205-3	PDF pg. 35		-	Confirmed incidents of corruption and actions taken	10	

MATERIAL TOPIC: ANTI-COMPETITIVE BEHAVIOR

GRI 103: Management Approach 2016	103-1	PDF pg. 22		+Assurance Statement	Explanation of material topic and its boundary		
	103-2			+Assurance Statement	Management approach and its components		
	103-3			+Assurance Statement	Evaluation of management approach		
GRI 206: Anti-Competitive Behavior 2016	206-1	PDF pg. 35		-	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes		

Category: Environmental

MATERIAL TOPIC: MATERIALS

GRI 103: Management Approach 2016	103-1	PDF pg. 22		+Assurance Statement	Explanation of material topic and its boundary		
	103-2			+Assurance Statement	Management approach and its components		
	103-3			+Assurance Statement	Evaluation of management approach		
GRI 301: Materials 2016	301-1	PDF pg. 36		-	Materials used by weight or volume		
	301-2	PDF pg. 36		-	Percentage of materials used that are recycled input materials	7	
	301-3	PDF pg. 36		-	Percentage of products sold and their packaging materials that are reclaimed by category		

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MATERIAL TOPIC: ENERGY

GRI 103: Management Approach 2016	103-1	PDF pg. 22		+Assurance Statement	Explanation of material topic and its boundary		
	103-2			+Assurance Statement	Management approach and its components		
	103-3			+Assurance Statement	Evaluation of management approach		
GRI 302: Energy 2016	302-1	PDF pgs. 41-43		+Assurance Statement	Energy consumption within the organization		TA07-03-01; EM0302-04
	302-2		Energy consumed outside the organization is currently unavailable. We report GHG emissions associated with various sources in EN17 and continue to collaborate with vendors and contractors to quantify the amount of energy consumed outside the organization. We anticipate expanding the scope of our reporting for this indicator in the near future.	-	Energy consumption outside of the organization		
	302-3	PDF pg. 43		+Assurance Statement	Energy intensity		
	302-4	PDF pg. 43		-	Reduction of energy consumption	7	
	302-5	PDF pg. 44		-	Reductions in energy requirements of products and services	7, 8, 9	

MATERIAL TOPIC: WATER

GRI 103: Management Approach 2016	103-1	PDF pg. 22		+Assurance Statement	Explanation of material topic and its boundary		
	103-2			+Assurance Statement	Management approach and its components		
	103-3			+Assurance Statement	Evaluation of management approach		
GRI 303: Water 2016	303-1	PDF pgs. 39-40		+Assurance Statement	Total water withdrawal by source		303-2, 303-3; RT0101-07; TA04-28-01
	303-2	PDF pg. 40		-	Water sources significantly affected by withdrawal of water	7	
	303-3	PDF pg. 41		-	Total volume of water recycled and reused		

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MATERIAL TOPIC: BIODIVERSITY

GRI 103: Management Approach 2016	103-1			+Assurance Statement	Explanation of material topic and its boundary		
	103-2	PDF pg. 22		+Assurance Statement	Management approach and its components		RT0101-07; TAO4-28-01
	103-3			+Assurance Statement	Evaluation of management approach		
GRI 304: Biodiversity 2016	304-1	PDF pgs. 46-47		-	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas		EM0302-12
	304-2	PDF pg. 47		-	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	7, 8	EM0302-10
	MM1	PDF pg. 47		-	Land disturbed or rehabilitated	7	
	MM2	PDF pg. 48		-	Number and Percentage of Sites Identified as Requiring Biodiversity Management Plans	7	
	304-3	PDF pgs. 48-49		-	Habitats protected or restored	7, 8	
	304-4	PDF pgs. 49-50		-	Total number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk	7	

MATERIAL TOPIC: EMISSIONS

GRI 103: Management Approach 2016	103-1			+Assurance Statement	Explanation of material topic and its boundary		
	103-2	PDF pg. 22		+Assurance Statement	Management approach and its components		
	103-3			+Assurance Statement	Evaluation of management approach		
GRI 305: Emissions 2016	305-1	PDF pg. 44		+Assurance Statement	Direct greenhouse gas (GHG) emissions (Scope 1)	7, 8	RT0101-01; EM0302-01
	305-2	PDF pg. 44		+Assurance Statement	Energy indirect greenhouse gas (GHG) emissions (Scope 2)	7	
	305-3	PDF pg. 45		+Assurance Statement	Other indirect greenhouse gas (GHG) emissions (Scope 3)	7	
	305-4	PDF pg. 45		-	Greenhouse gas (GHG) emissions intensity	7	
	305-5	PDF pg. 45		-	Reduction of greenhouse gas (GHG) emissions	7, 9	
	305-7	PDF pg. 46		-	NO _x , SO _x , and other significant air emissions		RT0101-03; EM0302-03

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Category: Environmental (continued)

MATERIAL TOPIC: EFFLUENTS AND WASTE

GRI 103: Management Approach 2016	103-1			+/Assurance Statement	Explanation of material topic and its boundary		
	103-2	PDF pg. 22		+/Assurance Statement	Management approach and its components		
	103-3			+/Assurance Statement	Evaluation of management approach		
GRI 306: Effluents and Waste 2016	306-1	PDF pg. 51		-	Total water discharge by quality and destination		
	306-2	PDF pg. 53		+/Assurance Statement	Total weight of waste by type and disposal method	7	TA07-05-01
	306-3	PDF pg. 54		-	Total number and volume of significant spills		
	MM3	PDF pg. 54		-	Overburden, rock, tailings and sludge		EM0302-07; EM0302-08
	306-4	PDF pg. 53		-	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally	7	
	306-5	PDF pgs. 51-52		-	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the organization's discharges of water and runoff		

MATERIAL TOPIC: ENVIRONMENTAL COMPLIANCE

GRI 103: Management Approach 2016	103-1			+/Assurance Statement	Explanation of material topic and its boundary		
	103-2	PDF pg. 22		+/Assurance Statement	Management approach and its components		
	103-3			+/Assurance Statement	Evaluation of management approach		
GRI 307: Environmental Compliance 2016	307-1	PDF pg. 55		-	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations		

MATERIAL TOPIC: SUPPLIER ENVIRONMENTAL ASSESSMENT

GRI 103: Management Approach 2016	103-1			+/Assurance Statement	Explanation of material topic and its boundary		
	103-2	PDF pg. 22		+/Assurance Statement	Management approach and its components		
	103-3			+/Assurance Statement	Evaluation of management approach		
GRI 308: Supplier Environmental Assessment 2016	308-2	PDF pg. 55		-	Significant actual and potential negative environmental impacts in the supply chain and action taken		

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Category: Social

MATERIAL TOPIC: EMPLOYMENT

GRI 103: Management Approach 2016	103-1	PDF pg. 22		+/ Assurance Statement	Explanation of material topic and its boundary		
	103-2			+/ Assurance Statement	Management approach and its components		
	103-3			+/ Assurance Statement	Evaluation of management approach		
GRI 401: Employment 2016	401-1	PDF pg. 57		-	Total number and rates of new employee hires and employee turnover by age group, gender and region		
	401-2	PDF pg. 58		-	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation		
	401-3		Parental leave is offered to employees in North America, South America and Asia. As parental leaves vary in accordance with local laws and customs across the regions where we operate, Mosaic is unable to track retention rates of employees returning from parental leave. Therefore, this indicator has been omitted due to the information being unavailable at this time.	-	Return to work and retention rates after parental leave, by gender		

MATERIAL TOPIC: LABOR/MANAGEMENT RELATIONS

GRI 103: Management Approach 2016	103-1	PDF pg. 22		+/ Assurance Statement	Explanation of material topic and its boundary		
	103-2			+/ Assurance Statement	Management approach and its components		
	103-3			+/ Assurance Statement	Evaluation of management approach		
GRI 402: Labor/ Management Relations 2016	402-1	PDF pg. 58		-	Minimum notice periods regarding operational changes, including whether these are specified in collective agreements	3	
	MM4	PDF pg. 59		-	Number of strikes and lock-outs exceeding one week's duration, by country		EM0302-20

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MATERIAL TOPIC: OCCUPATIONAL HEALTH AND SAFETY

GRI 103: Management Approach 2016	103-1	PDF pg. 22		+Assurance Statement	Explanation of material topic and its boundary		
	103-2			+Assurance Statement	Management approach and its components		
	103-3			+Assurance Statement	Evaluation of management approach		
GRI 403: Occupational Health and Safety 2016	403-1	PDF pg. 60		-	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs	3	
	403-2	PDF pg. 60		-	Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region		RT0101-20
	403-3	PDF pg. 60		-	Workers with high incidence or high risk of diseases related to their occupation		
	403-4	PDF pgs. 61-62		-	Health and safety topics covered in formal agreements with trade unions		

MATERIAL TOPIC: TRAINING AND EDUCATION

GRI 103: Management Approach 2016	103-1	PDF pg. 22		+Assurance Statement	Explanation of material topic and its boundary		
	103-2			+Assurance Statement	Management approach and its components		
	103-3			+Assurance Statement	Evaluation of management approach		
GRI 404: Training and Education 2016	404-1	PDF pg. 62		-	Average hours of training per year per employee by gender, and by employee category	6	
	404-2	PDF pg. 62		-	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	6	
	404-3	PDF pg. 63		-	Percentage of employees receiving regular performance and career development reviews, by gender and by employee category		

MATERIAL TOPIC: DIVERSITY AND EQUAL OPPORTUNITY

GRI 103: Management Approach 2016	103-1	PDF pg. 22		+Assurance Statement	Explanation of material topic and its boundary		
	103-2			+Assurance Statement	Management approach and its components		
	103-3			+Assurance Statement	Evaluation of management approach		
GRI 405: Diversity and Equal Opportunity 2016	405-1	PDF pg. 59		-	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity		
	405-2	PDF pg. 59		-	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation		

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MATERIAL TOPIC: NON-DISCRIMINATION							
GRI 103: Management Approach 2016	103-1	PDF pg. 22		+/ Assurance Statement	Explanation of material topic and its boundary		
	103-2			+/ Assurance Statement	Management approach and its components		
	103-3			+/ Assurance Statement	Evaluation of management approach		
GRI 406: Non-discrimination 2016	406-1	PDF pg. 63		-	Total number of incidents of discrimination and corrective actions taken	1, 2, 6	
MATERIAL TOPIC: FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING							
GRI 103: Management Approach 2016	103-1	PDF pg. 22		+/ Assurance Statement	Explanation of material topic and its boundary		
	103-2			+/ Assurance Statement	Management approach and its components		
	103-3			+/ Assurance Statement	Evaluation of management approach		
GRI 407: Freedom of Association and Collective Bargaining 2016	407-1	PDF pg. 64		-	Operations and suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and measures taken to support these rights		
MATERIAL TOPIC: CHILD LABOR							
GRI 103: Management Approach 2016	103-1	PDF pg. 22		+/ Assurance Statement	Explanation of material topic and its boundary		
	103-2			+/ Assurance Statement	Management approach and its components		
	103-3			+/ Assurance Statement	Evaluation of management approach		
GRI 408: Child Labor 2016	408-1	PDF pg. 64		-	Operations and suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor	1, 2, 5	
MATERIAL TOPIC: FORCED OR COMPULSORY LABOR							
GRI 103: Management Approach 2016	103-1	PDF pg. 22		+/ Assurance Statement	Explanation of material topic and its boundary		
	103-2			+/ Assurance Statement	Management approach and its components		
	103-3			+/ Assurance Statement	Evaluation of management approach		
GRI 409: Forced or Compulsory Labor 2016	409-1	PDF pg. 64		-	Operations and suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures taken to contribute to the elimination of all forms of forced or compulsory labor	1, 2, 4	

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MATERIAL TOPIC: RIGHTS OF INDIGENOUS PEOPLES							
GRI 103: Management Approach 2016	103-1	PDF pg. 22		+Assurance Statement	Explanation of material topic and its boundary		
	103-2			+Assurance Statement	Management approach and its components		
	103-3			+Assurance Statement	Evaluation of management approach		
GRI 411: Rights of Indigenous Peoples 2016	411-1	PDF pg. 64		-	Total number of incidents of violations involving rights of indigenous peoples and actions taken		
	MM5	PDF pg. 64		-	Number of operations taking place in or adjacent to indigenous peoples' territories		TA04-30-01
MATERIAL TOPIC: LOCAL COMMUNITIES							
GRI 103: Management Approach 2016	103-1	PDF pg. 22		+Assurance Statement	Explanation of material topic and its boundary		
	103-2			+Assurance Statement	Management approach and its components		
	103-3			+Assurance Statement	Evaluation of management approach		
GRI 413: Local Communities 2016	413-1	PDF pg. 65		-	Percentage of operations with implemented local community engagement, impact assessments, and development programs	7	
	413-2	PDF pg. 67		-	Operations with significant actual and potential negative impacts on local communities		
	MM6	PDF pg. 68		-	Number and description of significant disputes relating to land use, customary rights of local communities and indigenous peoples		
	MM7	PDF pg. 68		-	The extent to which grievance mechanisms were used to resolve disputes relating to land use, customary rights of local communities and indigenous peoples, and the outcomes		
MATERIAL TOPIC: PUBLIC POLICY							
GRI 103: Management Approach 2016	103-1	PDF pg. 22		+Assurance Statement	Explanation of material topic and its boundary		
	103-2			+Assurance Statement	Management approach and its components		
	103-3			+Assurance Statement	Evaluation of management approach		
GRI 415: Public Policy 2016	415-1	PDF pg. 68		-	Total value of political contributions by country and recipient/beneficiary		
MMSD MATERIAL TOPIC: RESETTLEMENT							
GRI 103: Management Approach 2016	103-1	PDF pg. 22		+Assurance Statement	Explanation of material topic and its boundary		
	103-2			+Assurance Statement	Management approach and its components		
	103-3			+Assurance Statement	Evaluation of management approach		
GRI G4 Guidelines: Mining and Metals Sector Disclosures	MM9	PDF pg. 69		-	Sites where resettlements took place, the number of households resettled in each, and how their livelihoods were affected in the process		

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MMSD MATERIAL TOPIC: CLOSURE PLANNING							
GRI 103: Management Approach 2016	103-1	PDF pg. 22		+/ Assurance Statement	Explanation of material topic and its boundary		
	103-2			+/ Assurance Statement	Management approach and its components		
	103-3			+/ Assurance Statement	Evaluation of management approach		
GRI G4 Guidelines: Mining and Metals Sector Disclosures	MM10	PDF pg. 69		-	Number and percentage of operations with closure plans		
MATERIAL TOPIC: CUSTOMER HEALTH AND SAFETY							
GRI 103: Management Approach 2016	103-1	PDF pg. 22		+/ Assurance Statement	Explanation of material topic and its boundary		
	103-2			+/ Assurance Statement	Management approach and its components		
	103-3			+/ Assurance Statement	Evaluation of management approach		
GRI 416: Customer Health and Safety 2016	416-1	PDF pg. 70		-	Assessment of the health and safety impacts of product and service categories		
MATERIAL TOPIC: MARKETING AND LABELING							
GRI 103: Management Approach 2016	103-1	PDF pg. 22		+/ Assurance Statement	Explanation of material topic and its boundary		
	103-2			+/ Assurance Statement	Management approach and its components		
	103-3			+/ Assurance Statement	Evaluation of management approach		
GRI 417: Marketing and Labeling 2016	417-1	PDF pg. 70		-	Type of product and service information required by the organization's procedures for product and service information and labeling, and percentage of significant product and service categories subject to such information requirements		
	417-2	PDF pg. 70		-	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes		

General Disclosures

Organizational Profile

102-2 Activities, brands, products and services

The Mosaic Company is the world's leading producer and marketer of concentrated phosphate and potash crop nutrients. Through our broad product offering, we are a single source supplier of phosphate- and potash-based crop nutrients and animal feed ingredients. We serve customers in approximately 40 countries. We are the largest integrated phosphate producer in the world and one of the largest producers and marketers of phosphate-based animal feed ingredients in North America and Brazil. Following our January 8, 2018 acquisition (the "Acquisition") of the global phosphate and potash operations of Vale S.A. conducted through Mosaic Fertilizantes P&K Ltda (formerly Vale Fertilizantes S.A.), we are the leading fertilizer production and distribution company in Brazil.

We mine phosphate rock in Florida and Brazil. We process rock into finished phosphate products at facilities in Florida, Louisiana and Brazil. Upon completion of the Acquisition, we became the majority owner of a joint venture operating a phosphate rock mine in the Bayovar region in Peru, in which we previously held a minority equity interest. We mine potash in Saskatchewan, New Mexico and Brazil. We have other production, blending or distribution operations in Brazil, China, India and Paraguay, as well as a joint venture to develop a phosphate rock mine and chemical complexes in the Kingdom of Saudi Arabia.

PHOSPHATES

We sell phosphate-based crop nutrients and animal feed ingredients throughout North America and internationally. We account for approximately 73 percent of estimated North American annual production of concentrated phosphate nutrients.

POTASH

We sell potash throughout North America and internationally, principally as fertilizer, but also for use in industrial applications and, to a lesser degree, as animal feed ingredients. We account for approximately 40 percent of estimated North American annual potash production.

MOSAIC FERTILIZANTES

We produce and sell phosphate and potash-based crop nutrients, and animal feed ingredients, in Brazil. In addition to five phosphate rock mines, four chemical plants and a potash mine in Brazil, this segment consists of sales offices, crop nutrient blending and bagging facilities, port terminals and warehouses in Brazil and Paraguay. The Mosaic Fertilizantes segment also serves as a distribution outlet for our Phosphates and Potash segments. We account for approximately 77% of estimated annual production of concentrated phosphate crop nutrients in Brazil and 100% of estimated annual potash production in Brazil.

See our [website](#) for a full list of our phosphate, potash, premium crop nutrient and animal feed products.

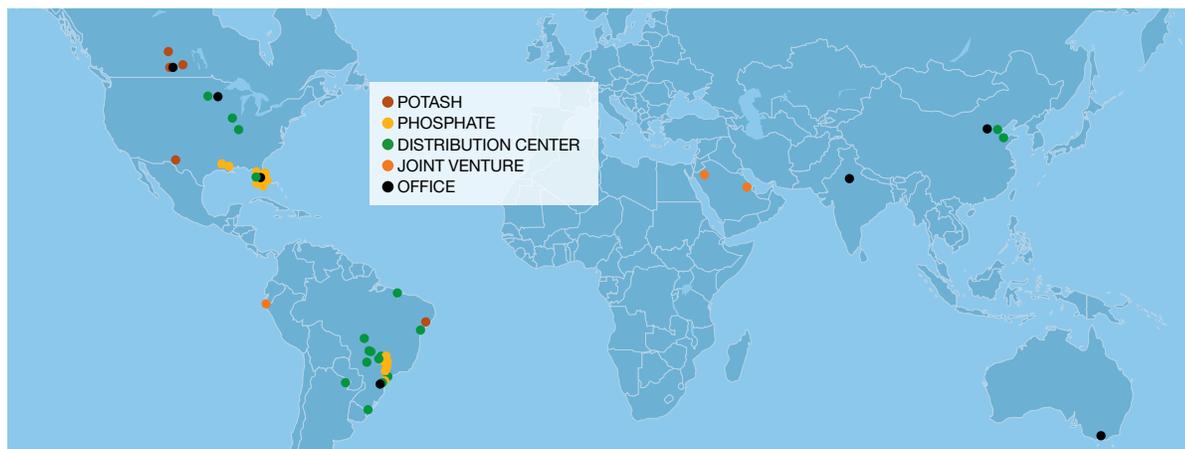


102-4 Location of operations

We mine phosphate rock in Florida and process rock into finished phosphate products at facilities in Florida, Louisiana and Brazil. We mine potash in Saskatchewan, New Mexico and Brazil. We have other production, blending or distribution operations in Brazil, China, India and Paraguay, as well as strategic equity investments in a phosphate rock mine in the Bayovar region in Peru and a joint venture formed to develop a phosphate rock mine and chemical complexes in the Kingdom of Saudi Arabia.

Mosaic conducts business through wholly and majority-owned subsidiaries, as well as businesses in which we own less than a majority or a non-controlling interest. We are organized into three reportable business segments: Phosphates, Potash and Mosaic Fertilizantes. Additional information about our business and operating segments is provided in our [2018 Form 10-K](#).

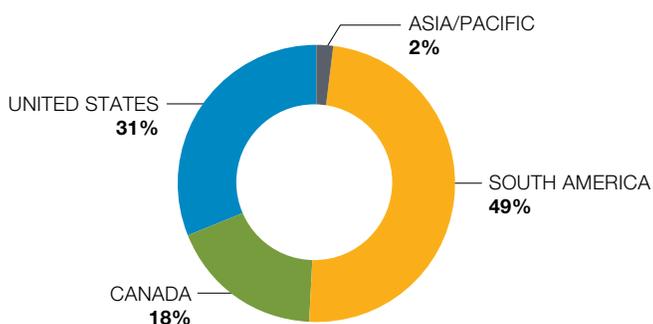
GLOBAL OPERATIONS



102-8 Information on employees and other workers

As of December 31, 2018, Mosaic employed 12,639 regular employees.

EMPLOYEES BY REGION



2018

WORKFORCE BY REGION AND GENDER

COUNTRY	MALE	FEMALE	TOTAL
Australia	1	—	1
Brazil	5,463	724	6,187
Canada	1,914	304	2,218
China	108	50	158
India	51	7	58
Paraguay	60	8	68
United States	3,345	604	3,949
Total	10,942	1,697	12,639

NOTE: Mosaic does not track individual contract worker counts or demographics. Figures exclude long-term leaves, co-ops, seasonal and temporary employees. Employees considered to be on long-term leave are those away from work more than 180 days. "Temporary" employees represent a very small percentage of our total workforce (less than 1%). In 2018, we had 4 part-time (defined as less than 35 hours per week) employees in the United States: one female and three male. These employees are included in the totals above. 13 percent of Mosaic's total workforce is female.

102-9 Supply chain

Mining, producing and delivering millions of tonnes of fertilizer each year to customers around the globe is complex. It requires teams of dedicated professionals working to make responsible decisions each day and at every step in the production and supply chains.

MINING

We work to safely extract potash and phosphate ore from the Earth's extensive reserves.

FACT In our Florida Phosphate operations, phosphate rock is recovered using draglines. Our Brazil operations use an open pit process to extract phosphate reserves.

MANUFACTURING

We refine, process, and blend phosphate and potash minerals to create crop nutrition products, then prepare goods for shipment.

FACT We produce renewable energy through cogeneration, the process of converting waste heat to energy, satisfying approximately 40% of our phosphate operations' annual electricity consumption.

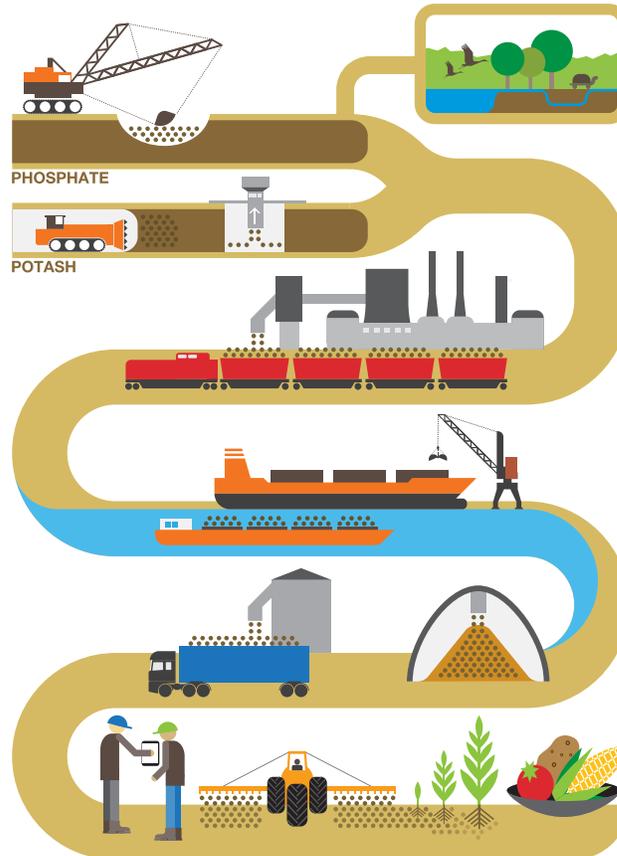
CUSTOMERS

We sell to retail customers and regional distributors, as well as large international growers.

FARMERS

We provide large and smallholder farmers with the vital crop nutrients and micronutrients they need to help grow healthy plants, achieve better yields, and grow food, feed, fuel and fiber more sustainably.

FACT Our premium MicroEssentials® product increases corn yields an average of 7.2 bushels per acre vs. traditional fertilizer.



LAND RECLAMATION & COMPENSATION

In Florida, we reclaim every acre of phosphate-mined land, creating high-quality habitats and wildlife corridors for fish, birds, and other animals, and land suitable for agriculture and other diverse beneficial uses. In Brazil, reclamation efforts include resloping and revegetating the mined area. Additionally, we set aside a portion of a mining site—approximately 20 percent of the project footprint—as a part of our efforts to preserve and protect unmined land.

FACT We reuse and recycle water to decrease our companywide consumption and increase efficient use.

TRANSPORTATION

We move raw materials, phosphate, potash and finished crop nutrition products across the supply chain using pipelines, trains, trucks, river barges and ships.

STORAGE & DISTRIBUTION

We have port terminals, warehouses and storage capacity in key geographies, with global distribution.

CONSUMERS

Our crop nutrients play a key role in growing crop yields and providing people with the healthy, affordable food they need to thrive.

FACT We partner with Field to Market®, The Nature Conservancy and other organizations on initiatives aimed at increasing agricultural productivity, sustainability and food security—while reducing environmental impacts and protecting natural resources.

Unlike many of our competitors, we have our own distribution system to sell phosphate- and potash-based crop nutrients and animal feed ingredients, whether produced by us or by other third parties, around the globe. In North America, we have one of the largest and most strategically located distribution systems for crop nutrients, including warehouse facilities in key agricultural regions. We also have an extensive network of distribution facilities internationally, including in the key growth regions of South America and Asia, with port terminals, warehouses, and blending plants in Brazil, Paraguay, China, and India. Our distribution operations serve the top four nutrient-consuming countries in the world: China, India, the United States and Brazil.

Our global presence allows us to efficiently serve customers in approximately 40 countries. See our 2018 [Form 10-K](#) for more information about our supply chain.

102-10 Significant changes to the organization and its supply chain

- On January 8, 2018, we completed the Acquisition of Vale Fertilizantes S.A. (now known as Mosaic Fertilizantes P&K Ltda, which we also refer to as Mosaic Fertilizantes). The assets we acquired include five Brazilian phosphate rock mines; four chemical plants; a potash mine in Brazil; an additional 40% economic interest in the Miski Mayo Mine, which increased our aggregate interest to 75%; and a potash project in Kronau, Saskatchewan. The size of our workforce increased from approximately 8,200 employees to more than 12,500 as a result.
- In 2018 we announced our decision to relocate our corporate headquarters to Tampa, Florida in 2019. The transition will occur over approximately an 18-month period. The move includes a consolidation of our administrative sites in the Tampa area. Employees impacted in Minnesota were offered relocation services and those not relocating to Florida were offered severance and provided ample notice and career transition services. There will continue to be an administrative office in Plymouth, MN, housing some finance, law, human resources and commercial employees.
- On August 31, 2018, we temporarily idled our South Pasture mine in response to market conditions. There was no reduction in workforce as a result of this decision as all affected employees were placed in roles at other facilities.
- In 2017, we announced idling of our Plant City facility. On November 14, 2018 we announced the Plant City facility would continue idling for one year, with a commitment to re-evaluate the market circumstances following the spring 2019 planting season.
- In 2018 we announced several changes in senior leadership.
 - Clint Freeland was named Senior Vice President and Chief Financial Officer in June 2018.
 - Richard McLellan was appointed Senior Vice President – Mosaic Fertilizantes in May 2018. Richard McLellan was previously Mosaic's Senior Vice President – Brazil.
 - Walter Precourt III was named Senior Vice President – Strategy and Growth effective January 1, 2019. He will continue to provide oversight for the Environmental, Health and Safety (EHS) organization. Walter Precourt was previously Senior Vice President – Phosphates.
 - Bruce Bodine was named Senior Vice President – Phosphates and provides oversight for the corporate procurement organization effective as of January 1, 2019. Bruce Bodine was previously the Senior Vice President – Potash.
 - Karen Swager was named Senior Vice President – Potash in January 2019. Previously, Karen Swager held leadership positions at Mosaic, including Vice President – Minerals, Vice President – Concentrates, Vice President – Mining Operations and General Manager in our Phosphates business.
 - Corrine Ricard, Senior Vice President – Commercial was appointed to lead the Human Resource organization, while retaining her commercial responsibilities, until a permanent replacement is named.

102-12 External initiatives

102-13 Membership of associations

Mosaic recognizes the importance of being active in industry associations and cross-sector business forums. These common platforms help advance cutting-edge scientific research and best management practices within our company and our industry. We consider the relevance of each engagement opportunity to our business strategies, and we pursue mutually beneficial partnerships. Many of the key organizations we engage with are listed here.

ORGANIZATION	WAYS WE ENGAGE	INVOLVEMENT
CROSS-SECTOR ORGANIZATION		
CDP	Reporter Services Member for Climate Change and Water	Mosaic supports CDP's aims to improve transparency with respect to greenhouse gas emissions goals and develop reduction strategies. We report to CDP annually.
Global Reporting Initiative (GRI)	GOLD Community Member	As a member of the GOLD Community, Mosaic is helping to shape the future of sustainability and reporting. Our annual sustainability disclosure is based on GRI's G4 guidelines.

102-13 Membership of associations (continued)

ORGANIZATION	WAYS WE ENGAGE	INVOLVEMENT
Manufacturers Alliance for Productivity and Innovation (MAPI)	Member and Council Participant	MAPI's mission is to build strong leadership within manufacturing, and to drive the growth, profitability, and stature of global manufacturers. As a member of MAPI, Mosaic has representatives on several councils, and uses and provides input to the non-profit's research and benchmarking efforts.
National Association of Manufacturers (NAM)	Member	Through membership and committee participation, Mosaic contributes to NAM's work to create a favorable policy climate for manufacturing in the United States.
United Nations Global Compact (UNGC)	Signatory	In 2011, Mosaic became a signatory to the UNGC, affirming our deep commitment to operating responsibly. In early 2019 our Mosaic Fertilizantes business became a signatory to UNGC. We communicate our progress on the UNGC's universal principles in our annual sustainability disclosure.
INDUSTRY ORGANIZATION		
Agriculture Nutrient Policy Council (ANPC)	Member	Our membership in the ANPC allows us to be an active stakeholder and leader in the policy process.
Agricultural Retailers Association (ARA)	Board Level	Mosaic contributes to ARA's mission to advocate, influence, educate and provide support to agricultural retailers.
Associação Nacional para Difusão de Adubos (ANDA)	Board Level	As a member of ANDA, Mosaic promotes the value and correct use of fertilizers in Brazil.
Brazilian Agribusiness Association (ABAG)	Member	At ABAG, Mosaic engages in policy discussions to improve the business environment for agribusiness and promote initiatives to support farmers.
Brazilian Association of Mineral Feed Industries (ASBRAM)	Member	Mosaic engages in regulatory discussions that affect the animal feed industry.
Brazilian Mining Institute (IBRAM)	Board Level	Through IBRAM, Mosaic contributes directly to regulatory discussions that affect the mining sector and provides support of sustainability initiatives.
Conservation Technology Information Center (CTIC)	Board Level	Mosaic continued to partner with CTIC on several initiatives that champion, promote, and provide information on technologies and sustainable agricultural systems.
Fertiliser Association of India (FAI)	Member	Mosaic supports and partners with FAI in its objective to ensure food security through balanced and efficient use of plant nutrients.
Fertilizer Canada (formerly Canadian Fertilizer Institute)	Committee and Board Level	Mosaic supports Fertilizer Canada's efforts to promote the responsible, sustainable and safe production distribution and use of fertilizers.
Field to Market®	Board Level	Mosaic contributes to solutions for sustainability and continuous improvement in U.S. commodity agriculture.
International Fertilizer Industry Association (IFA)	Member	Mosaic supports IFA's efforts to represent, promote and protect the fertilizer industry among policymakers, regulators, farmers and society at large.
National Union for the Animal Feed Industry (Sindirações)	Member	Through Sindirações, Mosaic contributes to the discussions at the technical chambers of the Ministry of Agriculture of Brazil.
National Union for the Fertilizer's Raw Materials Industry (Sinprifert)	Board Level	At the board level of Sinprifert Mosaic leads initiatives to improve the competitiveness of the national producers of fertilizers.
Saskatchewan Chamber of Commerce	Committee and Board Level	Mosaic contributes to the Chamber's role as the voice of Saskatchewan business, promoting Saskatchewan as the best place to live, work and invest.
Saskatchewan Mining Association (SMA)	Committee and Board Level	Mosaic supports the SMA's aims to enhance the general welfare of the mining industry through technical innovations in the fields of health and safety standards, waste disposal, environmental protection, and extractive metallurgy research and development.
Saskatchewan Potash Producers Association (SPPA)	Committee and Board Level	Our membership in SPPA allows us to be an active stakeholder in the policymaking process.
The Fertilizer Institute (TFI)	Board Level	Mosaic partners with TFI in its mission to represent and promote the fertilizer industry.

Ethics and Integrity

102-16 Values, principles, standards and norms of behavior

102-17 Mechanisms for advice and concerns about ethics

In a rapidly changing business environment, it is important for us to remain grounded and focused on what we agree is most important. No matter where Mosaic operates in the world, we ask that our employees adhere to the same companywide principles.

- **MISSION:** We help the world grow the food it needs
- **PRINCIPLES:** We are responsible, innovative, collaborative and driven
- **PRIORITIES:** Develop, engage and empower our employees; Grow and strengthen our business; Create value for our stakeholders

Our **Code of Business Conduct and Ethics** aligns with those principles and provides information about how we make sure we always do the right thing. Mosaic also maintains a 24-hour independently administered confidential and anonymous incident reporting hotline for all Mosaic employees, contractors, vendors, and the public to report perceived ethical issues.

Governance

102-20 Executive-level of responsibility for economic, environmental and social topics

Mosaic's approach to sustainability reflects our commitments to global food security, the environment, our people, the communities where we operate, and our company. We encourage each person at Mosaic to act responsibly and contribute to our company's success. It's our collective decisions and actions that must be ethical, strategic and sustainable.

Sustainability leadership begins with our Board of Directors (Board). The Environmental Health, Safety and Sustainable Development (EHSS) Committee of the Mosaic Board of Directors provides oversight of our environmental, health, safety, and sustainable development strategic vision and performance.

View the **EHSS Committee Charter** for more information. The Board and Senior Leadership Team review the EHSS Committee's recommendations in order to develop new companywide policies, initiatives, targets and goals. A team of employees, overseen by a Vice President of Public Affairs, manages sustainability initiatives on a day-to-day basis.

The Mosaic Company **Senior Leadership Team (SLT)**, led by our President and Chief Executive Officer, is primarily responsible for managing profit and loss and delivering growth. Implementation and delivery of Mosaic's business strategy and plan are monitored by SLT members. The SLT is supported in matters of sustainability by leading vice president- and director-level employees who are accountable for ensuring the goals are achieved through site-specific, business segment and companywide implementation.

Stakeholder Engagement

102-40 List of stakeholder groups

102-42 Basis for identification and selection of stakeholders with whom to engage

102-43 Organization's approach to stakeholder engagement

102-44 Key topics and concerns that have been raised through stakeholder engagement

General Disclosures

Mosaic's stakeholders include our employees, local communities, customers, government and regulatory officials, investors, civil society organizations, environmental organizations, suppliers, media, academia and others. We identify our stakeholders as those who are affected by our activities and whose actions have the potential to affect the outcome of our business activities. Our stakeholders help shape our strategic priorities and give meaning to our mission to help the world grow the food it needs.

MOSAIC'S STAKEHOLDERS	WAYS WE ENGAGE	HOW OFTEN	TOPICS OF IMPORTANCE
Academia	Fund or sponsor research, technical and industry meetings, research site visits, in-person visits during growing season, remote meetings	Monthly to Quarterly	Product and process innovations, agronomic research and development, nutrient stewardship, product trials, regulations, and impacts of our business and the industry
Civil Society Organizations	Internet site, meetings with organizations, local community and business leaders, corporate communications	Weekly to Biannually	Nutrient stewardship, habitat conservation, watershed protection and restoration, sustainable agriculture, food security, local community investment and partnerships
Customers	Sales relationships, regular visits, customer service surveys, special events, memberships in industry organizations	Weekly to Biannually	Product innovations, agronomic research and development, nutrient stewardship, certifications, impacts of our business and the industry
Employees, Senior Leadership Team and Board of Directors	Intranet sites, e-screens at plants and mines, town hall meetings, engagement surveys and activities, Annual Meeting, committee meetings	Daily	Environment, health and safety; company, business segment and facility performance; our business and our industry; business conduct and ethics; professional development and training; Mosaic's strategic community
Government and Regulatory Officials	Federal, provincial/state, and local executive and legislative branch advocacy, permitting applications, tours of plants and mines, engagement in state, national and trade association activities	Biweekly to Quarterly	Compliance, environmental investment and footprint, industry leadership, voluntary programs
Investors and Financial Markets	Internet site, webcasts and presentations, Securities and Exchange Commission (SEC) reports, analyst meetings, annual shareholder's meeting, press releases	Daily to Quarterly	Investments, financial results, market data, operational excellence, risks and opportunities, company and shareholder priorities
Joint Ventures and Business Partners	Board meetings, technical and planning sessions, site visits	Daily to Biannually	Project details, environment, health and safety, investments, technologies, product and process knowledge
Labor Unions	Employee and labor relations meetings, contract negotiations	Daily to Annually	Safety, contract interpretation, employee relations issues, engagement, productivity, work environment
Local Communities	Internet site and community microsites, tours of plants and mines, community advisory panels, town halls and/or open houses, media, community organization memberships, economic and charitable partnerships	Daily to Quarterly	Partnerships and community relations, corporate and charitable support, environmental investment, environmental footprint, education, local jobs, economic impact
Media	Press releases, interviews and briefings, internet site and community microsites, SEC reports, tours of plants and mines, town halls and/or open houses	Daily to Quarterly	Company priorities, performance and products, food security, nutrient stewardship, watershed restoration, local economic impact, partnerships and community relations, corporate and charitable support
Retirees	Mailings, HR Connect	As needed to Annually	Plan benefit summaries and changes, investment updates and disclosures
Suppliers	Internet site, supplier survey, site visits, meetings	Daily to Biannually	Cost reduction, productivity, quality and innovation opportunities; new technologies; contract preparation; environment, health and safety evaluation; products and services provided; certifications; impacts of products and services

102-41 Employees covered by collective bargaining agreements

EMPLOYEES COVERED BY COLLECTIVE BARGAINING AGREEMENTS

COUNTRY	UNION EMPLOYEES	NON-UNION EMPLOYEES	PERCENTAGE OF EMPLOYEES COVERED BY COLLECTIVE BARGAINING AGREEMENTS
Canada	1,258	961	57%
United States of America	1,981	1,968	50%
China	106	54	66%
Total	3,345	2,983	53%

NOTE: We work closely with unions and our unionized employees at both a national and international level. 100 percent of our employees in Brazil are covered by collective work agreements. None of our employees in India or Paraguay are covered by collective work agreements. The total reported above represents the percentage of our total workforce covered by collective work agreements.

Reporting Practice

102-46 Defining report content and Topic Boundaries

102-47 List of material topics

103-1 Topics and Topic Boundaries

As a global, publicly traded company, we are continually exploring what it means to be responsible and accountable to Mosaic's diverse stakeholders. From employees, customers, shareholders and industry partners to trade unions, community organizations, government officials and academics, we seek ongoing dialogue with individuals or representatives of stakeholder organizations that impact—or are impacted by—Mosaic's business activities.

Topics and indicators that reflect Mosaic's significant economic, environmental and social impacts or that would substantively influence the assessments and decisions of stakeholders are deemed by us to be "significant" for sustainability reporting purposes.

AccountAbility's AA1000 Stakeholder Engagement Standard guided the review process that reflects our company's commitment to more fully inform all stakeholders on matters that influence our business and society.

In addition to analyzing peer sustainability reports, Global Reporting Initiative (GRI) G4 guidelines and the Mining and Metals sector supplement, as well as other reports and frameworks, our ongoing analysis includes:

- Reviewing Mosaic's public financial reports, sustainability reports, GRI tables, policies and commitments as well as an internally conducted survey of senior management, customers and employees
- Scanning media reports, social media and blogs for issues raised for public concern
- Engaging leaders of local, regional, national and global community organizations
- Comparing sustainability materiality determination practices to peer companies
- Cataloging issues identified by stakeholder surveys, sustainability indexes, principles of the United Nations Global Compact, regulatory and policy trends, industry associations and cross-sector partnerships
- Reviewing marketing research and customer satisfaction survey results
- Analyzing investor insights
- Compiling community perceptions through social media activity and brand awareness surveys

General Disclosures

Significant issues are structured around and summarized in five areas of our sustainability focus: Food, Environment, People, Company and Community. Please see our [2018 State of the Business Report](#) for relevant updates in each of these areas.

Mosaic team members originally evaluated the significance of more than 50 issues based on their relevancy and importance to stakeholders, the likelihood of impact and the connection to Mosaic's business strategies and values. We monitor these issues as part of the process described above. In 2018 we began a materiality refresh exercise to incorporate insights from the newly acquired Mosaic Fertilizantes business. As part of the refresh process we analyzed reporting disclosures by Mosaic and Brazil peer companies and suppliers to identify gaps in stakeholder groups and engagement methods, material issues and reporting best practices; and to evaluate opportunities for improvement in areas related to targets-setting, prioritization of material issues, external assurance of materiality and sustainability governance. Our goals and reporting continue to evolve as we refine our understanding and identify further material issues.

Full disclosures of Mosaic's management approach precede the disclosure of the respective topic. We list boundaries for each topic below.

MATERIAL TOPICS

GRI	TOPIC	TOPIC BOUNDARY WITHIN THE ORGANIZATION	TOPIC BOUNDARY OUTSIDE THE ORGANIZATION	
GRI 201	Economic Performance	Within Mosaic	Investors; Suppliers and Joint Ventures; Competitors; Government and Regulatory Officials; Civil Society Organizations; Media	
GRI 202	Market Presence		Local Communities; Civil Society Organizations	
GRI 203	Indirect Economic Impacts			
GRI 204	Procurement Practices			
GRI 205	Anti-corruption		Investors; Suppliers and Joint Ventures; Competitors; Government and Regulatory Officials; Civil Society Organizations; Media	
GRI 206	Anti-competitive Behavior			
GRI 301	Materials		Local Communities; Suppliers; Customers; Government and Regulatory Officials; Investors, Media	
GRI 303	Water			
GRI 304	Biodiversity			
GRI 305	Emissions			
GRI 306	Effluents and Waste			
GRI 307	Environmental Compliance			
GRI 308	Supplier Environmental Compliance			
GRI 401	Employment			Suppliers, Local Communities, Government and Regulatory Officials; Labor Unions; Investors, Media
GRI 402	Labor/Management Relations			
GRI 403	Occupational Health and Safety			
GRI 404	Training and Education			
GRI 405	Diversity and Equal Opportunity			
GRI 406	Non-discrimination			
GRI 407	Freedom of Association and Collective Bargaining			
GRI 408	Child Labor			
GRI 409	Forced or Compulsory Labor			
GRI 411	Rights of Indigenous Peoples			
GRI 412	Human Rights Assessment			

MATERIAL TOPICS (CONTINUED)

GRI	TOPIC	TOPIC BOUNDARY WITHIN THE ORGANIZATION	TOPIC BOUNDARY OUTSIDE THE ORGANIZATION
GRI 413	Local Communities	Within Mosaic	Suppliers, Local Communities, Government and Regulatory Officials; Labor Unions; Media
GRI 415	Public Policy		
GRI 416	Customer Health and Safety		
GRI 417	Marketing and Labeling		

102-45 Entities included in the consolidated financial statements

102-48 Restatements of information

102-49 Changes in reporting

102-54 Claims of reporting in accordance with the GRI Standards

102-56 External assurance

Our 2018 sustainability disclosure details The Mosaic Company's 2018 performance across broad sustainability focus areas of Food, Environment, People, Company and Community. Our report has been prepared in accordance with the GRI Standards: Core option. The content of this report has been shaped by the issues identified through a significance study, the results of which we analyze on an ongoing basis. This report primarily summarizes the activities occurring in the period of calendar year 2018 and, unless otherwise noted, all data is presented on a calendar year (CY) basis. We encourage readers to refer to our [2018 Form 10-K](#) and the remainder of our [2018 State of the Business Report](#) for additional information about Mosaic.

This report covers our global operations, including entities over which Mosaic exercises majority control, including all its operations and departments that have the potential to generate significant impacts. Except for financial and select environmental data, this report does not specifically reflect equity-method investments, including joint ventures in which we have a minority interest. Please see our [2018 Form 10-K](#) (page F-54) for more information about those investments.

In our [2018 State of the Business Report](#) we are including data from facilities we acquired as part of the 2018 acquisition of Vale Fertilizantes S.A. in Brazil. We are also including data from the Miski Mayo mine since we became the majority owner of the joint venture that operates it following the Vale Fertilizantes acquisition. Impacts associated with a joint venture in the Kingdom of Saudi Arabia in which we have a 25% interest are reported as part of our Scope 3 emissions in [305-3](#).

We revised 2017's phosphogypsum value in [MM3](#) due to a conversion error. We also revised 2015 and 2016 overburden figures in [MM3](#) due to a formula error.

Mosaic commissioned iCompli, a division of BPA Worldwide, to provide independent third-party assurance over the sustainability content within the Mosaic 2018 sustainability disclosure (the "Report," covering activities occurring in the period of calendar year 2018). This engagement has been managed in accordance with AccountAbility's AA1000AS (2008) assurance standard, where the format of the engagement was structured to meet the AA1000AS Type I (Moderate) requirements.

Mosaic authorized Trucost Plc to perform a third-party verification of waste, energy, water withdrawals and greenhouse gas emissions data and calculations of Scope 1, Scope 2 and limited Scope 3 emissions for 2018. Trucost evaluated Mosaic's data, methodologies and calculations, and provided a statement of assurance to the AA1000AS standard.

Throughout the report, "tonnes" refers to metric ton unit of measurement equaling approximately 2,205 pounds, whereas the occasional reference to "tons" refers to the unit of measurement equaling 2,000 pounds. References to sulfur are in "long tons," which is equal to 2,240 pounds.

Management Approach: Economic Performance

Since forming in 2004, Mosaic has grown to be a global leader in phosphates and potash crop nutrition. We are proud to be a competitive, low-cost producer with strong customer relationships and the financial strength to invest in growth. And we've led the industry in developing high-quality premium products that help growers succeed. We are focused on executing against our strategic priorities: developing, engaging and empowering our people; growing and strengthening our business; and creating value for stakeholders. Mosaic's sustainability targets and performance are closely aligned with our operational and financial goals. We respond annually to CDP and use the Global Reporting Initiative (GRI) framework with the Mining and Metals Sector Supplement to report on our environmental and sustainability performance. Our reporting index is aligned to many of the Sustainability Accounting Standards Board (SASB) metrics for the Metals & Mining and Chemicals industries.

We believe it is our responsibility to utilize our financial resources, technical expertise and innovative spirit to help the world sustainably grow the food it needs through strategic partnerships with leading organizations.

Our community investments are focused in the areas of food, water and local initiatives.

- **FOOD:** Mosaic is committed to supporting organizations that advance global agricultural development, agricultural research and education, and hunger relief for community members in need. These programs, respectively, include: The Mosaic Villages Project in India; micronutrient deficiency research and mobile soil testing labs; and local community food drives, food distribution trucks and school backpack programs.
- **WATER:** Mosaic supports organizations that work in watershed restoration, habitat conservation and nutrient stewardship. These programs, respectively, include: shoreline restoration and oyster reef installations; improved land management practices and wildlife protection; and 4R nutrient stewardship, which is best management practices for fertilizer application, minimizing field runoff and improving farmer yields.
- **LOCAL:** Mosaic supports philanthropic or civic partnerships that enrich the long-term strength of communities in which Mosaic has offices and operations. These programs, respectively, include: local schools, health care institutions, museums; special projects and sponsorship of events; and housing and disaster relief.

For more information on our management approach and financial progress, please see our [2018 Form 10-K](#) and the remainder of our [2018 State of the Business Report](#).

We support a variety of formal and informal Mosaic channels through which stakeholders can submit concerns, including [communicating with the Board of Directors](#).

201-1 Direct economic value generated and distributed

ECONOMIC PERFORMANCE (IN MILLIONS)

	2014	2015	2016	2017	2018
Revenue	\$9,055.8	\$8,895.3	\$7,162.8	\$7,409.4	\$9,587.3

OPERATING COSTS (IN MILLIONS)

	2014	2015	2016	2017	2018
Cost of Goods Sold	\$7,129.2	\$7,177.4	\$6,352.8	\$6,566.6	\$8,088.9
Selling, General and Administrative Expenses	\$382.4	\$361.2	\$304.2	\$301.3	\$341.1
Less: Unrealized Gain/Loss on Derivatives	\$32.0	\$31.9	\$(70.0)	\$12.4	\$(32.6)
Less: Depreciation, Depletion and Amortization	\$750.9	\$739.8	\$711.2	\$665.5	\$883.9
*Less: Wages and Benefits	\$1,429.3	\$1,441.5	\$1,358.1	\$1,435.2	\$1,657.5
Total Operating Costs	\$5,299.4	\$5,325.4	\$4,657.7	\$4,754.8	\$5,921.2
Wages and Benefits	\$1,429.3	\$1,441.5	\$1,358.1	\$1,435.2	\$1,657.5

*As reported in the Mosaic 2018 Form 10-K, Cost of Goods Sold include plant and manufacturing personnel wages and benefits while Selling, General and Administrative expenses generally include corporate personnel wages and benefits. For purpose of the sustainability disclosure, we show the portion of Cost of Goods Sold and Selling, General and Administrative expenses that constitute wages and benefits for plant and corporate employees.

PAYMENTS TO PROVIDERS OF FUNDS (IN MILLIONS)

	2014	2015	2016	2017	2018
Dividends Paid	\$382.5	\$384.7	\$385.1	\$210.6	\$38.5
Payments for Share Repurchases	\$2,755.3	\$709.5	\$75.0	\$0.0	\$0.0
Interest Paid (Net of Amount Capitalized)	\$121.9	\$126.2	\$124.5	\$155.0	\$173.9
Total Payments to Providers of Funds	\$3,259.7	\$1,220.4	\$584.6	\$365.6	\$212.4
Retained Earnings	\$11,168.9	\$11,014.8	\$10,863.4	\$10,631.1	\$11,064.7

TAX - PAYMENT TO GOVERNMENT (IN MILLIONS)

	2014	2015	2016	2017	2018
United States	\$(5.5)*	\$79.4	\$(45.0)	\$(57.6)	\$(42.4)
Canada	\$87.9	\$112.8	\$(25.3)	\$(8.7)	\$12.20
Brazil	\$2.7	\$(5.9)	\$(1.7)	\$3.4	\$(15.1)
Other	\$28.1	\$7.0	\$6.6	\$(7.2)	\$11.1
Total Income Taxes Paid	\$113.2	\$193.3	\$(65.4)	\$(70.1)	\$(34.2)

*2014 United States tax payments decreased due to 2013 overpayments and refunds. 2016 United States tax refunds relate to 2003 through FY2012 overpayments, while 2016 Canada tax refunds are from 2015 overpayments. 2017 United States tax refunds relate primarily to 2013, 2015 and 2016 overpayments, and 2017 Canada tax refunds relate to 2016 overpayments. 2018 United States tax refunds are related to alternative minimum tax credit refunds as a result of the Tax Cuts and Jobs Act, while 2018 Brazil refunds were issued due to refunds of tax credits.

201-1 Direct economic value generated and distributed (continued)**TAX - PAYMENT TO GOVERNMENT (IN MILLIONS)**

	2014	2015	2016	2017	2018
Canadian Resource Taxes and Royalties Expense**	\$195.0	\$281.3	\$121.5	\$142.0	\$198.8
Other non-income taxes***	\$76.3	\$75.6	\$82.0	\$84.3	\$89.1

**Represents tax expense during the period, not cash payments.

***Other non-income taxes include property taxes and a Florida mining tax.

The combined 2018 contributions by The Mosaic Company, The Mosaic Company Foundation and The Mosaic Institute in Brazil provided more than \$12 million of support through companywide philanthropic grant making, the United Way campaign's dollar-for-dollar match (up to \$1,000), in-kind products and services contributions, and paid employee volunteerism, including pro bono, skills-based technical assistance and functional-specific services. Please see [203-1](#) and [203-2](#) for more information about our contributions. 2018 community investments by geography are as follows:

2018 COMMUNITY INVESTMENTS BY GEOGRAPHY (U.S. DOLLARS)

GEOGRAPHY	INVESTMENT
Brazil	479,291.61
Canada	4,303,441.88
Florida	4,809,306.69
Global Partnerships	451,381.34
Louisiana	295,871.69
Minnesota	366,998.58
New Mexico	238,241.36
United States – National	1,285,955.00
Villages – India	96,074.04
Administrative/Program	88,504.10
Total	12,415,066.29

Mosaic uses an online grant application system to receive and evaluate proposals for funding. By accessing the online grant application system, potential grantees are able to review Mosaic's focus areas, grant making guidelines, application deadlines and our non-discrimination policy. Establishing a standardized grant making system with stated guidelines and policies online has provided greater transparency to our partners, shareholders, employees and communities. Through this system, grantees provide reports on their outcomes, enabling Mosaic to evaluate the effectiveness of each grant.

201-2 Financial implications and other risks and opportunities for the organization's activities due to climate change

Mosaic's "Commitment on Climate Change" acknowledges that global climate change creates uncertainty for our business and poses challenges for the health and wellbeing of the world's populations-ecologically, socially and economically.

The potential financial implications with regard to the physical changes associated with climate change, as well as potential regulatory response changes, are discussed in [Mosaic's 2018 CDP Climate Change Response](#) and in Mosaic's [2018 Form 10-K](#) Report.

201-3 Defined benefit plan obligations and other retirement plans

BENEFIT PLAN OBLIGATION (IN MILLIONS)

	2014	2015	2016	2017	2018
Pension Plan Obligation	\$828.4	\$731.2	\$713.5	\$766.1	\$673.6
Fair Value of Plan Assets	\$812.1	\$726.7	\$715.6	\$793.2	\$701.2

NOTE: Please refer to the discussion of our defined benefit pension plans for North America in our [2018 Form 10-K](#).

UNITED STATES PENSION PLANS

	ASSETS AS OF 12/31/2014	ASSETS AS OF 12/31/2015	ASSETS AS OF 12/31/2016	ASSETS AS OF 12/31/2017	ASSETS AS OF 12/31/2018
Fixed Income	77%	95%	85%	75%	75%
United States Equity Securities	12%	2%	8%	15%	15%
Non-United States Equity Securities	7%	2%	6%	10%	10%
Real Estate	4%	—%	—%	—%	—%
Private Equity	—%	1%	1%	—%	—%
Other	—%	—%	—%	—%	—%
Total	100%	100%	100%	100%	100%

CANADIAN PENSION PLANS

	ASSETS AS OF 12/31/2014	ASSETS AS OF 12/31/2015	ASSETS AS OF 12/31/2016	ASSETS AS OF 12/31/2017	ASSETS AS OF 12/31/2018
Fixed Income	40%	39%	37%	38%	66%
United States Equity Securities	23%	22%	23%	22%	9%
Canadian Equity Securities	20%	20%	23%	20%	8%
Non-United States Equity Securities	14%	15%	14%	15%	13%
Private Equity	1%	1%	1%	1%	—%
Other	2%	3%	2%	4%	4%
Total	100%	100%	100%	100%	100%

INVESTMENT PLAN AND SAVINGS PLAN (IN MILLIONS)

	2014	2015	2016	2017	2018
Attributable Expense	\$51.5	\$55.1	\$51.1	\$54.3	\$51.2

*Only includes expense for defined contribution plans in the United States. Subtotals may not always add up to totals due to rounding.

Participation and funding target percentages for our United States and Canadian pension plans as of December 31, 2018, are as follows:

BENEFIT PLAN PARTICIPATION AND TARGET ATTAINMENT (as of December 31, 2018)

LOCATION	PARTICIPANTS	FUNDING ATTAINMENT
United States (Union)	3,070	98.4%
United States (Salaried)	2,740	100.4%
Colonsay (Hourly)	616	110%
Colonsay (Salaried)	67	106.6%
Esterhazy (Hourly)	1,392	115.2%
Esterhazy (Salaried)	206	108.4%
Brazil (Hourly)*	4,237	
Brazil (Salaried)*	1,330	

*We have four plans in Brazil of which only one is a pension plan subject to funding requirements. This plan has 309 participants and was funded at 103.2 percent at the time of this report. The remainder of the plans are similar to defined contribution plans and therefore, not subject to funding requirements.

201-4 Financial assistance received from government

TAX CREDITS AND SUBSIDIES

COUNTRY	TYPE	AMOUNT
Canada	Research and Development Credit	\$6,606,029
United States	Research and Development Credit	\$764,815
United States	Mine Rescue Team Training Credit	\$20,075
United States	Employee Retention Credit	\$312,745
Brazil	Employee Meal and Leave Subsidies	\$227,311
Brazil	Rouanet Law - Cultural Incentives	\$60,704
Brazil	Research and Development Incentive	\$218,016

NOTE: All figures are reported in United States dollars. As actual 2018 figures were not available at the time of reporting, these figures represent actual 2017 amounts. The Brazil and Canada figures were calculated using an average income statement ex-change rate used for financial reporting purposes.

Management Approach: Market Presence, Indirect Economic Impacts and Procurement Practices

At Mosaic, we understand that our business and our communities are indelibly linked. Our operating communities are also our homes—where we live, work and raise children. We strive to be a thoughtful and engaged neighbor, investing carefully and generously as we seek long-term partnerships with organizations that are making a difference.

Mosaic is dedicated to advancing the many ways that our business contributes to the sustainable development of the communities where we operate: investing in communities; hiring employees and contracting vendors from local communities; offering competitive wages and benefits to our workforce; and developing our future workforce.

INVESTING IN COMMUNITIES

The Mosaic Company, The Mosaic Company Foundation and The Mosaic Institute in Brazil partner with industry associations, nonprofit groups and stakeholders focused on food, water and local initiatives. We are especially committed to the strength and prosperity of the communities where we have offices and operations, including North America, South America and Asia. Our financial support is magnified by employee volunteerism and community involvement.

HIRING EMPLOYEES AND CONTRACTING VENDORS FROM LOCAL COMMUNITIES

As a matter of practice, and in accordance with Mosaic’s global job posting policies, we will “hire from within wherever possible.” In addition, Mosaic initiates and conducts its search for qualified candidates locally, before the search is broadened.

Mosaic’s mining and production operations take place in communities of varying size throughout North America. Mosaic does not have a written policy for giving preference to locally-based suppliers, but we do encourage and support local suppliers of all sizes. As a global company, the vendor screening process we have in place ensures that we maintain strict ethics, quality and safety standards. In an effort to support more local suppliers, we engage them, build partnerships, and explore opportunities to build capacity. Our [Supplier Code of Conduct and Ethics](#) outlines the standards of business integrity to which we hold ourselves and our suppliers accountable.

OFFERING COMPETITIVE WAGES AND BENEFITS TO OUR WORKFORCE

Our global talent investment philosophy is to provide competitive compensation and benefits, with flexibility to choose programs that best meet our employees’ needs.

DEVELOPING OUR FUTURE WORKFORCE

Skilled labor is a key priority in the geographies where we operate. We work with governments and institutions to help train skilled labor to develop the knowledge required to support Mosaic’s future workforce.

202-1 Ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation

Mosaic offers competitive compensation and benefits in each of the company’s significant locations of operation. As shown below in local currency, the standard entry-level wage range is higher than the prevailing local minimum wage for each location presented. For Mosaic, minimum wages are generally not relevant since the majority of entry-level Mosaic positions require a higher level of skills or knowledge than jobs to which the minimum wage rate would apply.

2018 MOSAIC LOCAL MINIMUM WAGE COMPARED TO LOCAL MINIMUM WAGE

SIGNIFICANT OPERATIONS	LOCAL MINIMUM WAGE	MOSAIC ENTRY-LEVEL WAGES*	MOSAIC ENTRY LEVEL WAGE RELATIVE TO LOCAL MINIMUM WAGE
U.S. Range/hr (USD)	\$7.25 – \$9.86	\$16.62 – \$28.55 (hourly) \$11.35 – \$18.08 (salaried)	157%
Canada Range/hr (CAD)	\$11.06	\$17.74 – \$25.99 (hourly) \$15.94 – \$24.04 (salaried)	144%
Brazil Range/hr (BRL)	\$4.72 – \$5.83	\$5.44 – \$5.83	115%
China Range/hr (CNY)	\$9.48 – \$12.18	\$21.94 – \$38.01	231%
India Range/hr (INR)	\$47.75 – \$57.29	\$136.43 – \$249.03	286%
Paraguay Range/hr (PGY)	\$8,291.16	\$9,009.61 - \$9,835.05	114%

202-2 Proportion of senior management hired from the local community at significant locations of operation

As a matter of practice, we will hire from within wherever possible. For senior leader roles, if no internal candidates are identified, a search will be conducted externally to find the best candidate for the leader role. The hire may or may not come from one of the communities where we have a local presence. These candidates are also supported with relocation assistance.

In 2018 approximately 87 percent of newly hired senior leaders—eight of whom were hired externally and seven hired internally—came from local communities.

For the purpose of this indicator, “significant locations of operation” refers to United States, Canada and Brazil. “Senior leader” is defined as those individuals who are responsible for a business unit, corporate function, business unit function, country or operations site; “local community” is defined as the country where our operations are located. “Senior leaders” represent less than 3 percent of our total workforce.

203-1 Development and impact of infrastructure investments and services supported

Livable communities require stable infrastructure and connectivity. As part of our community investment focus on local communities, Mosaic responds to community needs for welcoming public spaces, hospitals and emergency services, and entertainment and sports facilities that bring additional revenue to local economies. Our investments in this category in 2018 totaled approximately \$5 million. Here are examples of some of our recent community investments in infrastructure.

FLORIDA

- The City of Wauchula has been working on improvements to their downtown area. Mosaic is supporting that work by providing funding for a project that will connect two parks and create a one-park system. Improvements will include a boardwalk and path along the Peace River that will help increase use of this valuable community asset.
- In 2018, we made an in-kind donation of 28 acres of land in Tampa to Hillsborough County. The land, valued at over \$2.8M, will be used by local residents as a park.

CANADA

- In 2018, Mosaic announced \$150,000 in funding towards the building of an Industrial Arts Lab on Ochapowace First Nation. The Lab will allow high school students to learn carpentry skills to potentially apply to future careers or help with infrastructure on the First Nation. With plans to be connected to the existing Kakisiwew School to allow for easy access, the Lab is set to open its doors in Fall 2019.
- Mosaic committed \$100,000 to Cowessess First Nation to help with extensive renovations of their old school facility, and plans to turn it into a training center for the community. Renovations include a new furnace, flooring and pipes.
- Mosaic announced in 2018 a \$500,000 grant to the Wanuskewin Heritage Centre to upgrade and maintain the Trail of Discovery, a 1-kilometer trail that focuses on the science of archeology and what it tells us about the way First Peoples lived in the past.

INDIA

- Mosaic's Krishi Jyoti project aims to improve livelihoods in villages in rural India by enhancing farm productivity. In partnership with the project's implementing partner, The Sehgal Foundation, eight check dams have been constructed since 2008, increasing water storage capacity to 30 million gallons. The project also promotes education among children in these remote villages by providing them a healthy and safe school environment. Krishi Jyoti has supported the renovation of 24 government schools in the project villages, benefiting nearly 5,000 children. 2018 marked Mosaic's tenth year participating in the Krishi Jyoti project.

BRAZIL

- The Mosaic Institute recognizes the important contributions of public spaces and social centers to a community's wellbeing and invests in them locally. In 2018, it renovated one public school in Uberaba, State of Minas Gerais.

In 2018, combined contributions by The Mosaic Company, The Mosaic Company Foundation and The Mosaic Institute in Brazil through philanthropic funding, employee engagement and in-kind donations totaled more than \$12 million.

View our global and local community investments on [Mosaic's Giving Map](#).

203-2 Significant indirect economic impacts, including the extent of impacts

Mosaic has diverse and varied indirect economic effects on communities across the world. Due to the complex nature of the business and philanthropic activities in which Mosaic engages, we do not attempt to estimate our full indirect economic impact by using a measurement of currency. Here are some of the ways Mosaic contributes indirectly to economies around the globe:

- Located in Tampa, Florida, The Florida Aquarium receives more than 800,000 visitors each year. Approximately six to eight times a year, Mosaic barges returning from Louisiana collect sea water from the Gulf of Mexico and deliver this vital resource to the aquarium, which helps support over 8,000 animals and plants.
- Mosaic Arena, which opened in early 2018 in DeSoto County, Florida, serves as a community gathering place and promotes new economic opportunities for local businesses. DeSoto county's population is approximately 36,000 people. The All-Florida Championship Rodeo's signature three-day event attracts nearly 18,000 attendees, nearly 95 percent of whom are from out of town. Attendee spending related to this event is circulated throughout the local economy.
- Our customers, dealers, and vendors are all meaningful contributors to the economic vitality of the rural and regional communities where they operate. They provide employment, purchase goods and services, and pay taxes in their own communities.
- The Mosaic Villages Project works with smallholder farmers in India to help break the cycle of poverty, moving farmers from survival to surplus. Agronomic training is essential for these farmers, as they suffer from depleted soils and lack the land-management knowledge necessary to farm productively and sustainably. Mosaic's agronomists provide expertise to teach these farmers modern methods that increase yields and protect the local ecosystem. Additionally, participants in The Mosaic Villages Project in India receive no-interest loans to buy fertilizer at planting, and repay the loans through the sale of surplus yield at harvest. Fertilizer acts as an injection of capital to the region, helping farmers break the cycle of poverty that has gripped developing regions of the world.
- In Brazil and Paraguay, The Mosaic Institute recognized World Food Day by organizing a Hunger Action Month. As part of the month's activities, teams organized food collection and distribution events that served socially vulnerable families near our operations and public schools in nearby communities, providing training to 100 lunchroom employees to improve the quality of meals provided to students. Over 184 tonnes of food were donated and the efforts had positive impacts for 46,000 individuals and 10,500 families, 26 NGOs, and 39 public schools.
- The Mosaic Institute in Brazil also implemented programs to improve basic education, including promoting literacy and independent reading and refurbishing or supporting construction of public schools. In 2018 we constructed three libraries in Paranaguá, state of Paraná, one in Catalao, state of Goiás and one in Uberaba, state of Minas Gerais.

- Many of Mosaic’s community investments are focused on supporting hunger relief in communities and providing access to emergency food systems. Studies show that children who have sustained hunger have reduced abilities and capacity to learn in school. Access to regular food improves educational outcomes. Through work with the United Way and other local charities, Mosaic’s community investments help families achieve greater economic independence and improve educational outcomes for children.
- A 2015 economic study by The Fertilizer Institute estimates that the United States fertilizer industry contributes \$162 billion to the United States economy. The study goes on to estimate that fertilizer producers, wholesalers and retailers, and the businesses that serve them, support 519,900 United States jobs with total annual compensation of \$36 billion.
- In Saskatchewan, Mosaic supports Ignite Adult Learning Corporation, an organization that empowers marginalized young adults through education and skill building to transform themselves into self-sufficient, productive citizens. Over Ignite’s 29 years, their “apprentices” have averaged a 70% graduation rate from their program, and of those who graduate, 70% move directly into the labor force or further post-secondary education. To date, over 900 graduates have become self-sufficient members of the community.
- Additionally, many of Mosaic’s partnerships with community organizations continue to support positive healthcare, education, housing and recreational opportunities for our neighbors. Please see [203-1](#) and [Mosaic’s Giving Map](#) for more information.

204-1 Proportion of spending on local suppliers at significant locations of information

We report on purchases from local suppliers in the United States, Canada and Brazil. For the purposes of this indicator, operations in these areas are considered “significant” since they are in key geographies where most of our supply chain activities take place.

LOCAL SUPPLY CHAIN (PERCENT)

OPERATIONAL LOCATIONS	2018
Phosphate (United States Only)	86
Potash (Canada and United States)	63
Mosaic Fertilizantes (Brazil and Paraguay)	94

NOTE: Excludes governmental, raw materials, clubs and organizations, employee-related and freight and warehouse expenditures. Includes as locals in the Phosphates segment all vendors with addresses in Louisiana and Florida, and in the Potash segment all vendors with addresses in New Mexico, Saskatchewan and Manitoba. Mosaic Fertilizantes spend categories include indirect expenditures and logistics. Figures include all vendors with addresses within the country of operations.

Management Approach: Anti-corruption and Anti-competitive Behavior

Mosaic operates in a regulated industry and in areas throughout the world with varying degrees of perceived corruption. Mosaic also has routine interactions with foreign government officials and agencies related to obtaining licenses and approvals, customs, land use and other matters. The risk of corrupt practices exists in the countries where we operate as government officials and agencies are inherently involved in the production, sale, and distribution of our fertilizer products through the related laws and regulations governing these activities.

Mosaic must comply with all applicable laws of the United States, and all other countries in which we do business, that are designed to prevent bribery and corruption. Our [Code of Business Conduct and Ethics](#) demands strict compliance from our employees and requires any employees who have been assigned a company computer user ID—which is more than 4,200 employees—to complete online code of conduct training and certify compliance with the code annually.

Mosaic also maintains a 24-hour independently administered confidential and anonymous incident reporting hotline for all Mosaic employees. In addition, our company conducts a robust risk assessment to identify risks related to the U.S. Foreign Corrupt Practices Act (FCPA). A robust fraud risk assessment is also completed in the Sarbanes-Oxley compliance efforts.

We recognize the significance of the FCPA and has established a [Worldwide Anti-corruption Policy](#). We conduct periodic FCPA audits of selected various geographic locations and respective individuals—including but not limited to: country managers, sales representatives, accounting/finance personnel and supply chain—whose job responsibilities require a keen awareness of and compliance with the FCPA.

205-1 Total number and percentage of operations assessed for risks related to corruption and the significant risks identified

The total number of business segments analyzed for risks related to corruption in 2018: three (Potash, Phosphates and Mosaic Fertilizantes). The percentage of business segments analyzed for risks related to corruption in 2018: 100 percent (all three business segments). We also review select joint ventures including Miski Mayo in Peru and the Wa'ad al Shamal Phosphates Company in Saudi Arabia.

Transparency International's Corruption Perception Index ranks 180 countries and territories by their perceived levels of public sector corruption. We do not have production facilities in any of the 20 countries with the lowest ranking.

205-2 Communication and training on anti-corruption policies and procedures

Mosaic requires all salaried employees (which includes all management employees) to complete the online Foreign Corrupt Practices Act (FCPA) training. In addition to the online training, instructor-led training is also provided to certain employees based on their location and job responsibilities. As part of our Code of Business Conduct and Ethics (the “Code of Conduct”) certification process, which is required annually of all salaried employees, employees are specifically asked to certify as to their compliance with the FCPA in the past year.

Most recently, the 2017 Code of Conduct certification, completed in early 2018, had a 100 percent completion rate. View [404-1](#) for more information.

Board members receive the Code of Conduct training and are recertified annually, most recently with a 100 percent completion rate in 2018.

Following Mosaic’s acquisition of Vale Fertilizantes in early 2018, all Mosaic Fertilizantes employees received a summary of Mosaic’s Code of Conduct and Worldwide Anti-Corruption Policy. Employees who have computer access were also required to complete the online FCPA training.

In regard to business partners, Mosaic’s service agreements generally require suppliers to agree to follow the Mosaic Code of Conduct, a section of which addresses preventing bribery and corruption. The [Suppliers Code of Business Conduct and Ethics](#) states that suppliers adhere to the same level as required by Mosaic employees. Mosaic’s purchasing policy requires suppliers to acknowledge Mosaic’s Code of Conduct biannually in writing.

Mosaic’s [Worldwide Anti-corruption Policy](#) and [Code of Business Conduct and Ethics](#) are both publicly available on our [website](#).

205-3 Confirmed incidents of corruption and actions taken

As of the date of this report, Mosaic had not identified any material violations of our anti-corruption policy and had not dismissed or disciplined any employee for corruption, nor declined to renew a contract with a business partner due to violations related to corruption.

206-1 Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes

In 2018, there were no legal actions for anti-competitive behavior, anti-trust or monopoly practices.

Management Approach: Materials

We use various mineral resources and materials to make our crop nutrition products. For example, limestone is used to produce our animal feed products and for water treatment. Sulfur, a byproduct of crude oil and natural gas de-sulfurization, is used to produce steam, electricity and sulfuric acid, which is used to produce phosphoric acid. We use byproduct heat from sulfuric acid production to generate steam that we use in our operations and to generate electricity. Sulfur is also used in the production of our MicroEssentials® product line. Various micronutrients, including, zinc and sulfur, are key ingredients in our MicroEssentials product line. Ammonia is used in our finished products, diammonium phosphate (DAP), monoammonium phosphate (MAP) and MicroEssentials, and to neutralize the pH of the stack gases at our Esterhazy potash mine.

In line with Mosaic's **principle** of responsibility, we strive to be good stewards of natural resources, using them as efficiently as possible.

Coproduct and byproduct materials that are generated during the extraction and beneficiation of potash and phosphate are addressed in the waste section of this report. Mosaic strives to improve recovery and reuse of its wastes in Brazil, where the regulatory construct is more supportive of reuse of products such as phosphogypsum, a byproduct of the phosphate manufacturing process.

Mosaic products, predominantly fertilizer and animal feed ingredients, are used in agricultural operations. To the extent possible, bulk transport is used to minimize the need for extensive packaging - and therefore packaging waste - throughout the supply chain. Mosaic supports and helps promote The Fertilizer Institute's (TFI) Bulk Blend Workshops and Manual, which eliminates the need for packaging of major raw materials or the final product.

301-1 Materials used by weight or volume MATERIALS MINED OR CONSUMED (MILLION TONNES)

MATERIALS	2018
Ammonia	1.4
Limestone	0.18
Phosphate Rock	22.3
Potash Ore	31.25
Sulfur (Long Tons)	5.4

NOTE: Ammonia consumed depicted in the table above are for production of phosphate crop nutrients. Sulfur value represents long tons used for our own production in 2018.

301-2 Percentage of materials used that are recycled input materials

Sulfur is the most significant recycled raw material in our manufacturing processes. The sulfur used is recovered from crude oil and natural gas processing and then recycled in our plant operations to produce sulfuric acid, which we use to make phosphoric acid, steam and electricity. Our use of this product prevents an excess of sulfur that otherwise could be disposed of in landfills. In 2018, sulfur made up approximately 2 percent by weight of our total raw materials.

301-3 Percentage of products sold and their packaging materials that are reclaimed by category

Mosaic products, predominantly fertilizer and animal feed ingredients, are used in agricultural operations. To the extent possible, bulk transport is used to minimize the need for extensive packaging throughout the supply chain. Mosaic supports and helps promote The Fertilizer Institute's (TFI) Bulk Blend Workshops and Manual, which eliminates the need for packaging of major raw materials or the final product. In 2018, approximately 75 percent of the sales volumes (tonnes) from our business were sold in bulk.

Management Approach: Water, Energy, Emissions, Biodiversity, Effluents and Waste and Environmental Compliance

Respect for the natural environment is essential to the sustainability of our business. From our potash mines in Saskatchewan to our Florida phosphate operations and mining, manufacturing and distribution facilities in Brazil, we strive to optimize our production processes and reduce our environmental impact.

Our management of water, energy and greenhouse gas emissions and waste is guided by our [Environmental, Health & Safety Policy](#) and commitment to the United Nations Global Compact. Our sustainability targets, progress toward which we report annually, help focus our efforts and track our progress on these key issues.

We support a variety of formal and informal Mosaic channels through which stakeholders can submit concerns. Beyond outreach directly to Mosaic, the public has an opportunity to comment on state or federal rules and permits through Public Notice and formal comment periods. Please see [413-1](#) for more information.

WATER

We recognize that water is a critical natural resource that is essential to the sustainability of our operations, as well as the communities and ecosystems in which we operate. In our direct operations, we consume significant volumes of water in the mining and production of our phosphate and potash crop nutrient products. The primary sources of water for our operations are surface water; rainwater, used as alternative water supply; and groundwater. Our facilities monitor and evaluate water use to confirm it is minimized, and water recycling and reuse are being maximized. Secondary sources of water include water supplied by local authorities and partially treated industrial and domestic reclaimed water, also supplied by local authorities. Surface water withdrawals include once-through cooling water used by our Louisiana operations.

Discharges from Mosaic's Florida and Louisiana phosphate operations to downstream water bodies are highly regulated through federal National Pollutant Discharge Elimination System (permits that are administered by the Florida Department of Environmental Protection (FDEP) and Louisiana Department of Environmental Quality (LDEQ). Discharges are monitored, sampled and analyzed regularly by Mosaic, with reports provided to regulatory agencies to demonstrate compliance with permit limitations. The limitations are based on the water quality standards that protect the designated uses of the receiving water body. Mosaic's Saskatchewan facilities maintain a "zero-discharge" approach. When the discharge of freshwater is warranted following a high precipitation event, it is approved in advance by multiple regulatory agencies.

As it relates to the use of our products, crop nutrient products like those Mosaic manufactures have the potential to run off farmland and into waterways, which can contribute to impaired water quality. By preserving the quality of water, minimizing our own water use, and supporting and promoting agricultural practices that achieve the crop yield benefits of fertilizer while reducing nutrient losses to the environment, we are reducing the environmental impact of fertilizers on the global food supply.

Broadly, our water stewardship efforts are focused on:

- Preserving and maintaining the quality of the water we use in the communities where we operate;
- Promoting the 4R Nutrient Stewardship framework to minimize the impact of crop nutrients on waterways;
- Maximizing water recycling and reuse;
- Monitoring and evaluating our water use and driving facility-level conservation efforts;
- Developing partnerships with industry and government to use alternative water sources;
- Reporting performance and communicating with stakeholders

ENERGY AND EMISSIONS

Fertilizer production is an energy-intensive activity. We use energy and generate direct and indirect greenhouse gas emissions in the mining, production, distribution and use of our phosphate and potash crop nutrient products. Since our company's formation in 2004, we have invested in initiatives aimed at reducing energy use and emissions—efforts that have resulted in operating cost savings and improvements in environmental performance. By improving the efficiency of our operations and promoting sustainable agricultural practices, we are adapting to the potential threats of climate change and reducing the environmental impact of fertilizers on the global food supply.

Our approach to managing energy and greenhouse gas emissions includes:

- Emphasizing operating efficiency
- Investing in energy-efficient technologies and evaluating alternative energy sources
- Leveraging our agronomic expertise to promote efficiencies in agricultural systems, which have the potential to enhance customers' productivity
- Advocating for balanced clean energy policy that encourages the generation and consumption of existing, low-cost resources, such as waste heat recovery
- Reporting our energy and GHG performance and communicating with stakeholders

BIODIVERSITY

Protection of biodiversity is critical to global sustainable development and a significant component of Mosaic's sustainability efforts. In both our phosphate and potash operations in the United States, Canada and Brazil, prior to the start of mining - or when extending or expanding a mine - permits are secured from local, regional, state and federal government agencies. This exhaustive planning and approval process protects water, air, ecology, transportation, safety and other environmental, health, and public welfare considerations.

We work with multiple parties to evaluate ecological resource preservation opportunities and to avoid and minimize any harm to state and federally protected wildlife species found on mine properties.

Phosphate mining represents a temporary disturbance of ecological resources. Once mining is complete, we conduct acre-for-acre **reclamation** and return mined lands to productive uses for wildlife and people. To promote biodiversity, Mosaic may introduce certain species into reclaimed lands, such as the gopher tortoise, that may have previously resided on the parcel but moved prior to mining. All introductions and relocations of protected species are conducted in accordance with federal and state requirements and guidelines. Phosphates and potash operations' interaction with wildlife in the United States is regulated by state and federal agencies such as the Florida Fish and Wildlife Conservation Commission and the United States Fish and Wildlife Service (USFWS). These agencies maintain lists of protected species for which Mosaic develops species-specific habitat management plans for the proper protection measures are in place. Protection of these species is also reviewed and approved through the Federal, State and local permitting processes for our Florida phosphate mines.

In our potash facilities located in Saskatchewan, Canada, our approach to evaluating potential impacts to wildlife includes biological assessments for projects located in new or expanded footprint areas. Since potash mining is underground, such impacts are rare once a facility is in operation. Assessments include field surveys to identify rare species of plants, birds, mammals, reptiles and amphibians of special concern that may be impacted. Survey methods follow the recommendations of the provincial and federal agencies. Biological assessments for all expansion areas at the potash facilities followed this approach.

We work closely with regulators as to comply with all applicable regulations and agency-approved management plans and also to fund and/or conduct research that promotes the goal of wildlife and habitat conservation.

WASTE

Large quantities of byproduct materials generated as a result of mining and processing of potash and phosphate - referred to in this report as "mining wastes" are managed during the operation of a facility, and upon its closure. We apply industry best practices to manage and reuse overburden, tailings and byproducts associated with our mining and production practices. Potash tailings, consisting primarily of salt and clay, are stored in tailings management areas. A portion of the excess salt generated from potash mining is processed and then used for commercial

purposes, including road salt, water softener salt, and use in food grade products and industrial uses. Phosphate clay residuals from mining are deposited in clay settling areas (CSAs) located within the approved mine boundaries. These CSAs are eventually dewatered and reclaimed. Overburden and sand tailings produced at our phosphate mines are used in reclamation and mitigation conducted at the mines. Wet phosphogypsum, a byproduct of our phosphate manufacturing process, is managed in permitted phosphogypsum management systems (“gypstacks”) in the United States.

In Brazil some phosphogypsum is stacked, whereas the remainder is sold to third parties for use in agricultural and industrial applications. In 2018, we sold 71% of the total volume of phosphogypsum generated at the Cajati and Uberaba facilities. We store the process water that separates from phosphogypsum during the dewatering process in gypstacks. We comply with federal, state and local regulations related to these materials.

Certain solid wastes generated by our phosphates operations in the United States are subject to regulation under the Resource Conservation and Recovery Act (RCRA) and related state laws. The Environmental Protection Agency (EPA) rules exempt “extraction” and “beneficiation” wastes, as well as 20 specified “mineral processing” wastes, from the hazardous waste management requirements of the RCRA. Accordingly, certain residual materials like phosphogypsum, as well as process wastewater from phosphoric acid production, are exempt from RCRA regulation. Phosphogypsum and process wastewater nonetheless still are subject to extensive regulation.

Mosaic’s operations generate a variety of nonhazardous solid wastes, including domestic refuse, construction and demolition debris, and waste lubricants. Our waste management program provides assurance that all of our locations have a process in place to minimize waste generation and that waste management practices do not adversely affect the environment or health and safety of employees and the public.

We endeavor to choose on-site process chemicals that are the least hazardous, thereby seeking to lower risk to occupational health and safety and minimizing waste management implications. Mosaic facilities generate hazardous waste during production and maintenance operations. The types of hazardous solid waste generated at Mosaic’s United States facilities typically include spent cleaning solvents, paint-related wastes and some spent laboratory chemicals. At concentrate facilities, wastes generated during production and maintenance operations include waste that is characteristically hazardous for corrosivity and/or toxicity (e.g., low pH and/or metals content). Each location has an appropriate hazardous waste management system to ensure that the waste is properly and safely disposed. No hazardous wastes are shipped internationally for disposal.

We continue to improve our comprehensive waste management strategy, accounting for federal, state and local requirements and to align it to the Mosaic environmental health and safety management system.

ENVIRONMENTAL COMPLIANCE

We support a variety of formal and informal Mosaic channels through which stakeholders can submit concerns. Please see [413-1](#) for more information.

303-1 Total water withdrawal by source

GLOBAL WATER WITHDRAWALS (,000m³)

	2014	2015	2016	2017	2018
Groundwater	64,380	68,270	65,085	78,846	72,847
Municipal	781	730	914	1,050	1,296
Reclaimed Water	3,429	7,515	9,247	9,249	45,264
Surface Water	240,780	224,168	233,512	232,393	283,603
Total	309,370	300,683	308,758	321,721	403,010

NOTE: Due to a data error discovered following the close of our third-party audit by Trucost, the 2017 groundwater data in this table differs from the figures listed on our assurance statement for that year by approximately 1%. The 2018 water withdrawal figures are higher due to inclusion of recently acquired Mosaic Fertilizantes facilities in Brazil. Please see our discussion of freshwater intensity for our year-over-year performance toward our freshwater reduction target.

In alignment with our [Sustainability Targets](#), we have modified our water intensity reporting to reflect a freshwater intensity measurement. In setting a water target, our intent is to drive water efficiency improvements across our business and to increase the use of alternative sources. Mosaic’s freshwater withdrawals per tonne of dry product crop nutrient and animal feed production are as shown below:

FRESHWATER INTENSITY (m³/TONNE)

	2014	2015	2016	2017	2018
Mosaic	4.59	4.86	4.76	4.85	4.52

NOTE: These figures do not include recently acquired Mosaic Fertilizantes facilities in Brazil since they were not part of the original target setting process. Companywide freshwater intensity including acquired facilities is 6.77 m³per tonne of finished product. For withdrawals and total intensity broken down by business segment, please see our [2018 Environment Metrics Supplement](#).

303-2 Water sources significantly affected by withdrawal of water

All of Mosaic’s operations operate using recycled or reused water when possible to minimize reliance on freshwater resources.

Our Central Florida operations use captured rainfall as an “alternative water supply.” Groundwater use is heavily regulated and is used by Mosaic to supplement captured rainfall. Local regulations promote the use of available alternative water supplies, such as reclaimed water from municipalities, before groundwater use. Mosaic Florida sites received reclaimed water from six municipal waste water treatment plants in 2018 at an average rate of 6.5 million gallons per day (MGD). Mosaic Florida Phosphates operations do not withdraw water from nationally or internationally protected surface water sources. However, Mosaic has two withdrawal points from springs: Lithia Springs and Buckhorn Springs. This water is used at Mosaic’s Riverview facility. In 2018, an average of 2.7 million gallons per day (MGD) was pumped from these spring water sources, representing less than 8 percent of the annual average spring flow for Lithia Springs, and less than 2 percent for Buckhorn Springs. Although the state of Florida has over 700 springs, 30 of which have been designated as Outstanding Florida springs and are afforded extra protection, neither Lithia nor Buckhorn Springs are on the Outstanding Florida spring list. Nonetheless, Lithia Springs is a valuable recreational asset to the local community. Mosaic and its predecessors have leased Lithia Springs as a 160-acre recreational park to Hillsborough County since 1957.

In the Potash segment, water use, including source and allocated volumes, are subject to site-specific regulations and permits. Water used in the operations process is recycled or reused, when possible. Our Saskatchewan potash operations withdraw from provincially regulated surface water and groundwater sources. Many of these sources also provide drinking water for nearby communities, and the surface water sources, including Cutarm Creek, Buffalo Pound Lake and Zelma Reservoir, are also used for recreational purposes. None of these sources are designated as national or international conservation areas.

The Mosaic Fertilizantes business does not withdraw from nationally or internationally protected water sources, though some facilities are located near water bodies or regions that have significant biodiversity value. For example, our Cajati mine is located approximately 15-20 km from a Ramsar-listed protected area in the states of Sao Paulo and Parana that contains diverse landscape and animal and aquatic environments. No withdrawals happen from water bodies within this area. Some of our facilities withdraw from sources in or near communities that are also used for drinking water or recreational purposes. All of our facilities are subject to facility-specific regulations, monitoring requirements and permits relating to water source and allocations.

Please see [303-1](#) and [303-3](#) for additional context.

303-3 Total volume of water recycled and reused

Figures are based on total water used by facility, less freshwater withdrawals.

RECYCLE AND REUSE VOLUME (,000m³)

BUSINESS SEGMENT	RECYCLE AND REUSE VOLUME
Phosphates	844,981
Potash	157,656
Mosaic Fertilizantes	609,519

NOTE: Carlsbad, N.M., Plant City, Wingate and South Pierce, Fla., and Faustina and Uncle Sam, La., are not included in respective business segment calculations. Belle Plaine is a solution mine and therefore, water use and methodology for recycle/reuse rate differs from shaft mining operations. However, recycled volumes from that facility are included in the totals for Potash. Legacy Brazil facilities previously reported under International Distribution segment are now reported under Mosaic Fertilizantes segment.

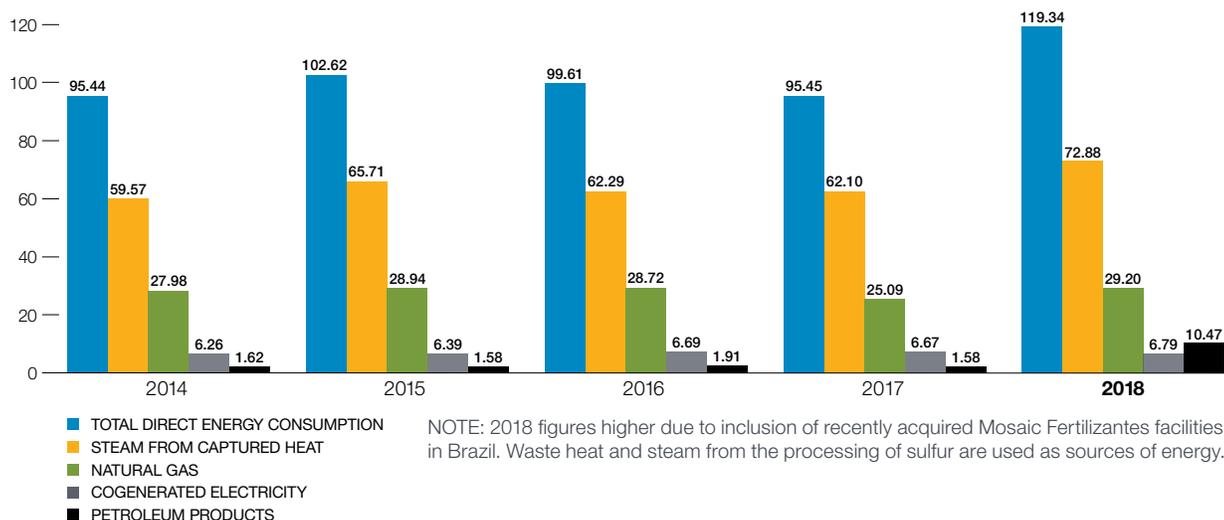
302-1 Energy consumption within the organization

Mosaic’s worldwide total direct energy consumption in 2018 was 119.34 million gigajoules (GJ).

ENERGY CONSUMPTION BY SOURCE

Approximately 86 percent of Mosaic’s worldwide total direct energy consumption in 2018 was from two sources: waste heat from sulfuric acid production and natural gas. The remaining portion was made up of petroleum products and propane.

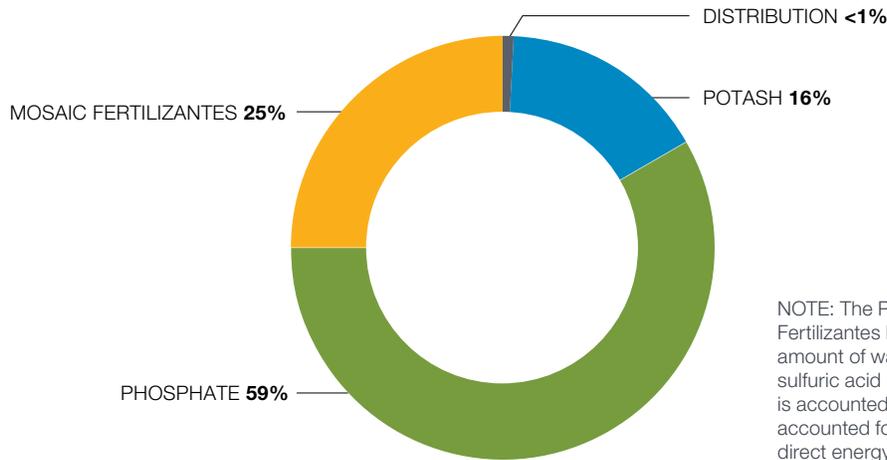
TOTAL DIRECT ENERGY CONSUMPTION BY SOURCE (MILLION GJ)



In 2018, our Florida phosphates operations used a portion of steam energy from the sulfuric acid manufacturing process to produce 5.9 million GJ of electricity through a process called cogeneration, approximately 87 percent, or 4.9 million GJ, of which was used internally at our Florida plants and mines. We consider the waste heat from sulfuric acid production to be a direct primary energy source for our Central Florida operations. We exported approximately 200,000 GJ of power to the local utility grid in Florida in 2018. Three of our recently acquired Brazil facilities used a similar process to harness waste heat from the sulfuric acid manufacturing process, resulting in generation of approximately 900,000 GJ of energy for use at their operations. In 2018 our Brazil operations sent approximately 80 GJ of electricity to the utility grid.

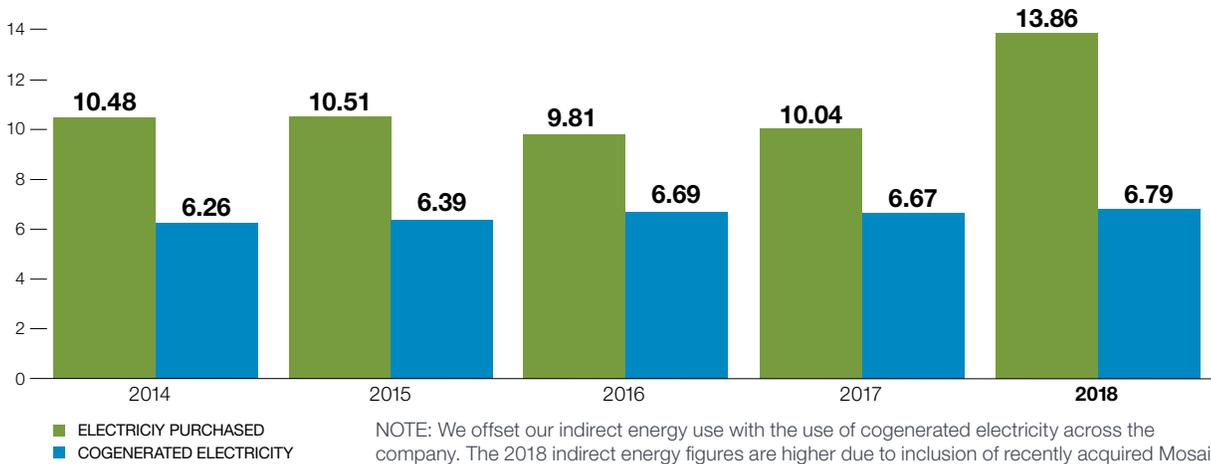
Mosaic looks for opportunities to improve the efficiency and expand the electricity output of our cogeneration assets. Mosaic could have additional opportunities for harnessing emissions-free power under a more supportive regulatory construct. We advocate for a balanced renewable energy policy that incentivizes and expands the generation and consumption of existing, low-cost renewables, such as waste heat recovery, and promotes fairer pricing for third-party renewable producers when selling power back to the electrical grid.

DIRECT ENERGY CONSUMPTION BY BUSINESS SEGMENT 2018 (%)



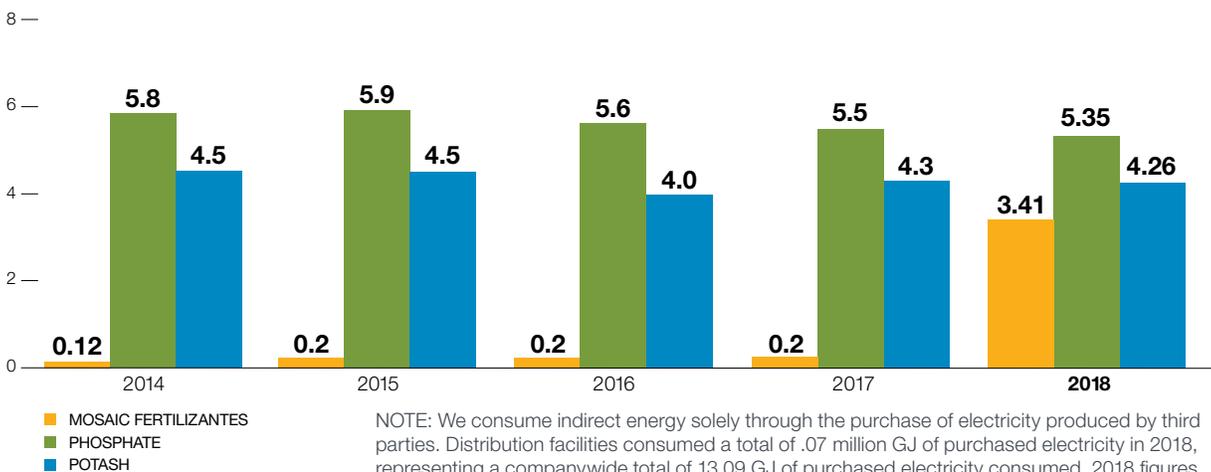
NOTE: The Phosphates and Mosaic Fertilizantes businesses use a significant amount of waste heat energy from the sulfuric acid manufacturing process, which is accounted for here. Distribution facilities accounted for less than 1% of companywide direct energy use.

INDIRECT ENERGY CONSUMPTION BY PRIMARY ENERGY SOURCE (MILLION GJ)



NOTE: We offset our indirect energy use with the use of cogenerated electricity across the company. The 2018 indirect energy figures are higher due to inclusion of recently acquired Mosaic Fertilizantes facilities in Brazil.

INDIRECT ENERGY CONSUMPTION BY BUSINESS SEGMENT (MILLION GJ)

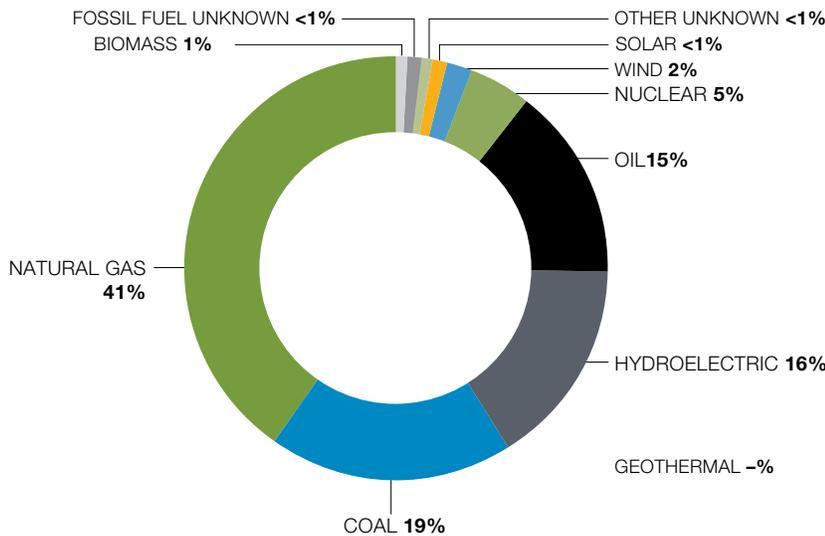


NOTE: We consume indirect energy solely through the purchase of electricity produced by third parties. Distribution facilities consumed a total of .07 million GJ of purchased electricity in 2018, representing a companywide total of 13.09 GJ of purchased electricity consumed. 2018 figures higher due to inclusion of recently acquired Mosaic Fertilizantes facilities in Brazil.

INDIRECT ENERGY CONSUMPTION BY FUEL SOURCE

Approximately 19 percent of Mosaic’s worldwide indirect energy consumption is from renewable sources, including hydroelectric, biomass sources and wind power.

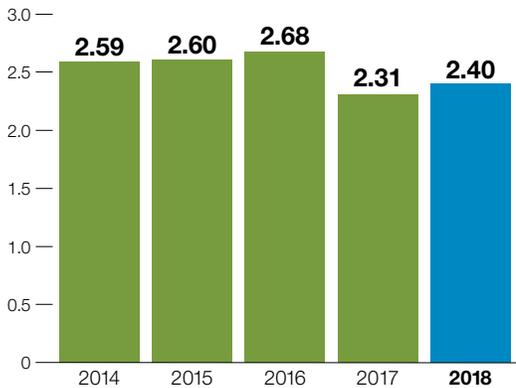
INDIRECT ENERGY CONSUMPTION BY GENERATION SOURCE (PERCENT)



NOTE: Subtotals do not add up exactly to 100 due to rounding. Purchased electricity sources for facilities in the United States are categorized consistent with the U.S Department of Energy 2016 Emissions & Generation Resource Integrated Database (eGrid) regional. Canada-purchased electricity sources are based on Saskpower 2016-2017 Annual Report. International facilities power generation sources are based on the U.S. Energy Information Administration’s national energy profiles. Renewable sources including hydroelectric, wind, biomass, geothermal and solar total approximately 9,479 GJ and 19% of companywide indirect energy consumption. The remaining 40,398 GJ (81%) of purchased electricity is from non-renewable sources. Breakdown of renewables by business segment as a percent of total indirect energy consumption are as follows: Phosphates 1%; Potash 7%; Mosaic Fertilizantes: 11%.

302-3 Energy intensity

TOTAL ENERGY PER TONNE FINISHED PRODUCT (GJ/FINISHED PRODUCT TONNES)



NOTE: Total energy includes electricity, natural gas, petroleum and energy from waste heat consumed by Mosaic operations including mines, manufacturing plants, distribution sites, agricultural operations and our Streamsong Resort. In alignment with our sustainability targets and progress tracking, steam is excluded as a source of energy. These figures do not include recently acquired Mosaic Fertilizantes facilities in Brazil since they were not part of the original target setting process. Companywide energy intensity including acquired facilities is 2.83 GJ/ tonne of finished product. For total energy intensity broken down by business segment, please see our [2018 Environment Metrics Supplement](#).

302-4 Reduction in energy consumption

Our energy improvement and sustainability process is part of a broader strategic business plan designed to help Mosaic meet or exceed efficiency, production and profitability requirements. This plan includes strategies for lowering purchased energy consumption through more efficient processes and maximizing use of cogenerated energy.

We also emphasize energy efficiency in our office facilities. Mosaic’s Florida headquarters in FishHawk was designed and constructed to Leadership in Energy & Environmental Design (LEED) standards and maintains its ENERGY STAR certification. Our leased Highland Oaks office in Tampa, Florida, was LEED certified in 2018. Mosaic’s leased Regina, Canada, offices were built to LEED standards and included the purchase of interior design elements, furniture and products, as well as other energy efficiencies associated with LEED. The Regina offices was LEED certified in 2017. Similarly, Mosaic’s Colonsay mill dry building in Saskatchewan was designed and constructed according to LEED standards. The LEED certification process for this building is underway.

We estimate savings of approximately 400,000 GJ due to conservation and efficiency improvement projects that we executed in 2018.

302-5 Reductions in energy requirements of products and services

Innovation is one of Mosaic's guiding principles. It influences our long-term business strategy and our companywide efforts to reduce energy use and greenhouse gas (GHG) emissions. Through process and product innovation, we're driving greater value for customers and stakeholders.

In addition to developing products and services that enhance customers' productivity and positively impact their energy efficiency, Mosaic maintains active partnerships with industry-leading research centers, targeting agriculture efficiency and productivity improvements. In 2018 we conducted 305 small plot trials in Argentina, Australia, Brazil, Chile, China, Canada, India, Latin America (Mexico to Peru) and the United States.

In 2018, energy efficient or renewable energy-based initiatives resulted in approximately 30,000 GJ of energy savings.

305-1 Direct GHG emissions (Scope 1)

305-2 Indirect GHG emissions (Scope 2)

WORLDWIDE GHG EMISSIONS (MILLION TONNES CO₂e)

BUSINESS SEGMENT/EMISSION TYPE	2014	2015	2016	2017	2018
Phosphates	2.87	2.83	2.69	2.30	2.36
Direct Emissions	1.91	1.97	1.92	1.50	1.69
Indirect Emissions	0.96	0.86	0.76	0.81	0.68
Potash	1.80	1.90	1.80	1.81	1.81
Direct Emissions	0.95	0.95	0.97	0.90	0.93
Indirect Emissions	0.85	0.95	0.83	0.91	0.88
Mosaic Fertilizantes	0.06	0.05	0.07	0.05	1.06
Direct Emissions	0.04	0.04	0.04	0.03	0.96
Indirect Emissions	0.00*	0.01	0.01	0.01	0.10
Distribution	0.01	0.01	0.03	0.02	0.01
Direct Emissions	0.00*	0.00*	0.02	0.00*	0.00*
Indirect Emissions	0.01	0.01	0.01	0.01	0.01
Total	4.73	4.78	4.56	4.17	5.25

NOTE: Figures higher due to inclusion of recently acquired Mosaic Fertilizantes facilities in Brazil. Legacy Brazil facilities previously reported under International Distribution segment are now reported under Mosaic Fertilizantes segment. Distribution, as reported here, represents Streamsong Resort and Mosaic-owned facilities involved in warehousing, blending and/or shipping Mosaic's products. Totals marked with an asterisk are less than 0.01 million tonnes. Direct emissions include Mosaic's consumption of natural gas, diesel, other fuels, process related activities, water treatment and refrigerants. Indirect emissions include electricity purchased from third-party utilities. Mosaic uses guidance from the CDP for calculating and reporting carbon dioxide equivalence (CO₂e). Subtotals may not always add up to totals due to rounding. Please see Mosaic's [CDP Climate Change](#) response for more information on our GHG emissions performance.

305-3 Other indirect GHG emissions (Scope 3)

OTHER INDIRECT GHG EMISSIONS (MILLION TONNES CO₂e)

EMISSION SOURCE	2014	2015	2016	2017	2018
Ammonia Purchases	2.20	2.31	2.63	2.14	2.29
Truck Transport (Florida)	0.01	0.03	0.04	0.04	0.05
Rail Transport (Florida, Canada and Brazil)	0.01	0.01	0.03	0.06	0.11
Business Travel	4,652	4,328	2,777	2,873	3,294
Marine Transport	—	0.20	0.25	0.48	1.23
Investments	—	—	—	—	0.69
Waste Disposal	—	—	—	—	0.02
Total	2.23	2.44	2.95	2.73	4.40

NOTE: Business travel presented here in MTN CO₂e, representing a companywide total of 4.40 million tonnes CO₂e. Ammonia purchases depicted are for production of phosphate crop nutrients. Year over year increases for rail and marine transport are due to including data from recently acquired Phosphate and Potash business in Brazil. Investment category includes emissions associated with our 25 percent interest in a joint venture investment in MWSPC, which operates a mine and chemical complex that produces phosphates fertilizers and other downstream products in the Kingdom of Saudi Arabia. Waste disposal category does not include mining wastes. Emissions associated with product use are addressed as part of our product stewardship programs. Please see our [2018 CDP Climate Change response](#) for more information.

305-4 GHG emissions intensity

DIRECT AND INDIRECT GHG EMISSIONS INTENSITY (METRIC TONNE CO₂e/PER TONNE OF FINISHED PRODUCT)

	2014	2015	2016	2017	2018
Mosaic	0.26	0.26	0.26	0.22	0.23

NOTE: These figures do not include recently acquired Mosaic Fertilizantes facilities in Brazil since they were not part of the original target setting process. Companywide GHG intensity including acquired facilities is 0.25 MTN CO₂e/tonne of finished product. For total GHG intensity broken down by business segment, please see our [2018 Environment Metrics Supplement](#).

305-5 Reduction of Greenhouse Gas (GHG) emissions

Mosaic is taking a proactive approach to reductions in GHG emissions, with particular emphasis on improving energy efficiency.

GHG emissions reductions resulting from the energy saving initiatives reported in [302-4](#) equal approximately 50,000 tonnes of CO₂e, the equivalent of taking more than 10,000 average United States cars off the road for a year.

For more information on Mosaic's efforts to reduce GHG emissions and address climate change, please see our [2018 CDP Climate Change response](#).

The results of a value chain exercise we worked with a third party to complete in 2016 confirmed that the GHG impacts associated with the application of our products—primarily potash and phosphate crop nutrients—are minimal. However, Mosaic promotes the use of best agricultural practices, including research and practices to minimize GHG emissions and other environmental impacts associated with the use of crop nutrient products. Further, Mosaic supports the minimization of GHG emissions and other environmental impacts from the global food supply by encouraging stakeholders to enhance their understanding, adoption and promotion of [4R Nutrient Stewardship](#).

305-7 NO_x, SO_x and other significant air emissions

CRITERIA AIR AND OTHER POLLUTANTS (,000 TONNES)

EMISSION TYPE	2013	2014	2015	2016	2017	NORMALIZED 2017
NO _x	3.06	3.55	4.20	3.27	2.85	0.15
CO	4.02	2.26	1.39	1.43	0.9	0.05
PM	3.87	5.09	5.73	6.05	6.09	0.32
SO ₂	13.65	17.04	15.97	16.55	15.77	0.84
VOC	0.25	0.66	0.25	0.24	0.2	0.01
NH ₃	1.40	1.86	1.82	1.84	1.61	0.09
F	0.14	0.15	0.13	0.11	0.14	0.01
H ₂ S	0.00	0.00	0.00	0.01	0.01	0.00*
SAM	0.13	0.15	0.16	0.16	0.3	0.02
HF	0.04	0.39	0.00	0.13	0.13	0.01

NOTE: Due to regulatory reporting timelines, emission values for 2018 were not available at the time of this report. We will update them when they are available in late summer or fall of 2019. All business segments included. Emissions based on stack test results and emission factors. SAM was higher in 2017 due to inclusion of Uncle Sam and Faustina, LA facilities. "Normalized" refers to the emissions value per 1,000 tonnes of finished product. Values marked with an asterisk are less than 0.01 per 1,000 tonnes.

304-1 Operational sites owned, leased, managed in, or adjacent to protected areas and areas of high biodiversity value outside protected areas

Although there are no International Union for Conservation of Nature (IUCN) protected management areas in the vicinity of our operations, Mosaic's Florida operations have placed approximately 16,000 acres in conservation easements along wildlife corridors and other ecologically significant habitats. As of December 31, 2018, Mosaic owned or maintained mineral interests in about 359,000 acres of land in Florida related to our phosphate surface mining operations. These mine areas may abut or contain habitat and wildlife corridors, many of which are recognized on official state maps* as being high in biodiversity. While Mosaic lands are not adjacent to, nor do they contain land registered as IUCN protected areas, many of these lands are permanently protected through conservation easements. Through December 2018, Mosaic owns or controls more than 29,000 acres in Florida that are designated as non-impacted floodplain, high-quality wetlands, and other preservation for which Mosaic has granted conservation easements.

Mosaic operates three Canadian potash facilities, all located in the southern half of the province of Saskatchewan, including our solution mine at Belle Plaine, two interconnected mine shafts at our Esterhazy shaft mine and our shaft mine at Colonsay. We continue the expansion of capacity in our Potash segment with the K3 shafts at our Esterhazy mine. Following ramp-up, these shafts are expected to add an estimated 0.9 million tonnes to our annual potash operational capacity and provide an infrastructure to move ore from K3 to the K1 and K2 mills. In December 2018, the production hoist for K3 was commissioned.

Mosaic has mineral rights to approximately 601,000 acres in Saskatchewan for potash mining and surface rights to approximately 35,000 acres. Mosaic's United States potash operations include a shaft mine in Carlsbad, New Mexico, with mineral rights to approximately 77,000 acres for potash mining and approximately 7,200 acres of surface rights. As part of the Vale Fertilizantes acquisition Mosaic acquired the assets of Vale Potash Canada, Ltd. and its greenfield potash project in the Kronau area approximately 27 km southeast of Regina, Saskatchewan. Mosaic leases approximately 294,000 acres of mineral rights, which have not been developed. Since shaft mining in Saskatchewan occurs at more than 3,000 feet below surface, and solution mining requires limited acreage for pipeline and cluster infrastructure, the only surface areas that are disturbed are the actual footprint of the mine shaft and the adjacent above-ground processing facilities and tailings management areas.

Mosaic operates five phosphates mines and one potash mine, and four crop nutrient production facilities in Brazil, totaling approximately 328,650 acres. Some Mosaic facilities in Brazil, such as the Cajati mine, are located in regions

with high biodiversity value. The Cajati mining operations occupy approximately 4,695 acres near the Ribeira Valley region in the state of Sao Paulo. Though not within a protected area, this facility is near a region that is considered to be of high cultural and biodiversity value due to existence of prominent archaeological sites, diversity of flora and fauna and threatened species as defined by IUCN. Similarly, there are approximately 712 acres of protected area near our Uberaba production facility, occupying approximately 1,433 acres in the state of Minas Gerais. Though not registered as IUCN protected areas, this land and others adjacent to many of our mining or production facilities are protected by stringent site-specific permit requirements and government regulations.

**Examples of official state maps include the Florida Department of Environmental Protection's Integrated Habitat Network maps as well as the Critical Lands and Waters Identification Project (CLIP) tool for the Florida Natural Areas Inventory*

304-2 Descriptions of significant impacts of activities, products and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas

Mosaic's Florida phosphate surface mine operations involve land clearing and dewatering. As part of the permitting process for our phosphate mines, regulatory agencies review comprehensive site survey data and assessment reports to determine and approve temporary impacts to species and habitat. Site specific Wildlife and Habitat Management Plans are developed for each mine, which outline measures to be implemented to protect and manage wildlife, listed species and their habitats, including provisions for pre-clearing surveys and species relocation for less mobile species, such as the gopher tortoise. In addition, in preparation for mining the groundwater table is drawn down for safety of personnel and equipment and to allow more efficient recovery of the phosphate ore. The groundwater level, however, is restored once mining is complete and the area is backfilled. Perimeter recharge systems are used to ensure no adverse impact from groundwater drawdown occurs outside Mosaic's property boundary. As with any land disturbance activity, barren land lends itself to nuisance plant species proliferation. Mosaic, however, uses aggressive physical and chemical treatments to ensure reclamation and mitigation efforts are effective in establishing biodiversity. In fact, post reclamation wildlife surveys indicate that even though the ground surface may be barren for a number of years as a result of the mine process, repopulation of these sites with wildlife species is successfully achieved. Many bird species are attracted to the water features contained within the active mine operation and remain onsite throughout the process. These are in part, why the state of Florida deems phosphate mining to be a temporary land use. Please see our [website](#) for more information.

Potash mining operations in Canada and the United States use shaft and solution mining techniques. Because of the limited footprint on surface features, such as surface infrastructure and tailings management areas, impacts to wildlife and habitats are also highly localized and relatively small in scale. Prior to surface development, Mosaic's Saskatchewan facilities consult multiple stakeholders as part of best management practices and procedures that minimize risk to wildlife and habitats in our operating areas.

Phosphate mining operations in Brazil use an open pit process to extract phosphate reserves. The process is heavily regulated and there are procedures in place to minimize impacts to wildlife and habitats. Each of our mining operations in Brazil has a management plan and environmental compensation strategies that address the locations' unique biodiversity needs. As an example of our environmental compensation strategies, we set aside a portion of the mining site—approximately 20 percent of the project footprint—as part of our efforts to preserve and protect unmined land. Please see [303-2](#), [304-1](#) and [MM2](#) for more information.

MM1 Land disturbed or rehabilitated

In our Florida phosphate operations, Mosaic reports our Florida mining and reclamation activities to the Florida Department of Environmental Protection (FDEP) Mining and Mitigation Program. As of the date of this publication, the 2017 and 2018 figures have not been fully validated and deemed complete by FDEP. We provide estimates of mined and reclaimed acres for those years in the table below. Once we have satisfied all reclamation requirements with respect to mined and disturbed lands, the FDEP “releases” those acres from further reclamation obligation and those reclaimed lands, are then considered “released acres” by FDEP. Accordingly, an increase in the annual released acreage is the result of our satisfaction of those reclamation requirements.

Our Brazil phosphate operations use an open pit process to extract phosphate reserves. Once mining is complete, land recovery efforts include resloping and revegetating the mined area. In addition to the totals below representing our Florida phosphate operations' mining and reclamation activities, the Mosaic Fertilizantes business mined and/or modified approximately 20,515 acres and recovered nearly 3,100 acres in 2018.

LAND MINED AND RECLAIMED (ACRES*)

	TOTAL ACRES MINED OR DISTURBED (NOT RECLAIMED)		TOTAL RECLAIMED (INITIAL REVEGETATION COMPLETE)		TOTAL RELEASED
	MINED	DISTURBED	MINED	DISTURBED	MINED AND DISTURBED
All Previous	146,533	34,134	107,911	29,663	72,208
2014	3,917	1,373	1,303	2,002	3,793
2015	2,627	6,243	8,800	3,846	14,433
2016	2,035	691	2,161	1,184	9,756
2017**	2,964	1,437	2,449	134	2,089
2018**	2,328	156	698	182	3,522

*Estimated acreages based on Annual Mine and Reclamation reports submitted to the Florida Department of Environmental Protection (FDEP) pursuant to Chapter 62C-16.0091 F.A.C. and FDEP approved Conceptual Reclamation Plans.

** As of the date of this publication's release, 2017 and 2018 reports have not been validated by FDEP. Accordingly, these figures are estimates only and may be revised in future reports.

MM2 Number and percentage of sites identified as requiring biodiversity management plans

All active mine sites within the United States, Canada and Brazil are required to operate pursuant to federal, state/provincial and local regulations related to management of habitat and wildlife. Mosaic has three operating mines in Florida; all (100%) have both Wildlife and Habitat Management Plans and Wetland Mitigation plans to promote and maintain biodiversity. While Mosaic's Carlsbad, NM potash mine is an underground mine, it maintains an active migratory bird program. In Brazil, each of our five active mine sites has a biodiversity management plan in place. Environmental Stewardship, including biodiversity and preservation of important ecological sites, is a critical part of Mosaic's sustainability efforts.

304-3 Habitats protected or restored

In our phosphates mining operations, we restore or reclaim every acre of land we mine or disturb, with an emphasis on habitat. We report those activities in **MM1**. Consequently there are at least as many acres in habitat after mining as before. In addition, environmentally sensitive lands—typically about 15 percent of a project site—are set aside for preservation, with additional reclaimed wetlands and some uplands (such as gopher tortoise recipient sites) protected through conservation easements. For example, a typical 10,000 acres mine site may be composed of about 25% wetland and 30% upland habitat, with the balance in other uses such as agriculture. Frequently—prior to mining—much of this habitat is fragmented or unconnected. Thus, holistic mitigation plans allow restoration to be consolidated and intertwined to promote wildlife migration as well as buffers for streams and flowways. Success of these restoration efforts is determined by standards imposed by regulatory agencies, and independent assessments by third party ecological professionals.

Mosaic planted approximately 936,510 trees in 2018, reclaiming uplands, significant upland habitats and wetlands. Please see **MM1** for information on our reclamation activities in 2018.

Mosaic has fostered partnerships with, and funding for, a variety of non-governmental organizations (NGOs) and academic institutions to advance our understanding of the habitats we manage through reclamation. Examples of these groups include Tampa Bay Watch, The Nature Conservancy, Archbold Biologic Station and Audubon, Florida.

Mosaic's Potash business segment is similarly committed to habitat restoration. For example, in 2012, Mosaic made a grant to Ducks Unlimited for \$2 million that will restore at least 500 acres of wetlands over a 10-year period in Saskatchewan. 2018 marked the seventh year of this agreement. To date, approximately 361 acres have been restored as part of this initiative.

As part of our environmental compensation efforts in the Mosaic Fertilizantes segment, we set aside a portion of a mining site—approximately 20 percent of the project footprint (but in certain cases as much as 80 percent)—to preserve and protect unmined land in its natural state. Additionally, as part of other mining requirements, we are required to complete other environmental compensation actions such as planting trees. As of 2018 approximately 8,400 acres were classified as protected, preserved or restored. As an example of the Mosaic Fertilizantes segment’s efforts, in 2018 we spent more than \$4.1 million to implement wildlife and forest preservation programs in the southwest region of the state of Minas Gerais. As part of those efforts, teams planted more than 214,000 trees in 2018 and contributed to efforts to preserve and monitor at-risk avian species including the Brazilian merganser and crowned solitary eagle.

304-4 Total number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk

Mosaic does not specifically manage wildlife species per the International Union for Conservation of Nature (IUCN) List designations, but rather in accordance with rules established for threatened or endangered species by regulatory agencies with authority in the regions in which we operate. Some of the species listed below are present on lists that are applicable to the region in which the facility is located.

IUCN RED LIST OF SPECIES POSSIBLY IN THE VICINITY OF OPERATIONS

IUCN RED LIST DESIGNATION	NUMBER OF SPECIES	TYPE OF SPECIES
FLORIDA PHOSPHATE OPERATIONS		
Endangered	—	-
Vulnerable	5	Florida bonneted bat, Florida mouse, gopher tortoise, Florida scrub jay, West Indian manatee
Near Threatened	5	Gopher frog, short-tailed snake, common bobwhite, loggerhead shrike, wood thrush, common grackle

Florida state and/or federally-listed threatened species considered IUCN Least Concern include the burrowing owl, Florida pine snake, least tern, little blue heron, Southeast American kestrel, tricolored heron, wood stork, Eastern indigo snake, crested caracara, American alligator, Eastern diamondback rattlesnake. We manage these species in accordance with rules established by applicable regulatory agencies.

U.S. POTASH OPERATIONS (NEW MEXICO)		
Endangered	2	Pecos gambusia ¹ , Southwestern willow flycatcher ¹
Vulnerable	2	Western yellow-billed cuckoo ² , Pecos bluntnose shiner ²
Near Threatened	3	Loggerhead shrike, snowy plover, piping plover

¹The pecos gambusia and western yellow-billed cuckoo were not necessarily observed near the Carlsbad facility, but they are listed by the Bureau of Land Management as confirmed or hypothetical species in the Carlsbad region. The U.S. Endangered Species Act (ESA) lists these species as “endangered”

²These species are ESA listed “threatened”

IUCN RED LIST DESIGNATION	NUMBER OF SPECIES	TYPE OF SPECIES
CANADA POTASH OPERATIONS		
Endangered	-	-
Vulnerable	3	Horned grebe, snowy owl, Sprague’s pipit
Near Threatened	2	Olive-sided flycatcher, loggerhead shrike

IUCN RED LIST OF SPECIES POSSIBLY IN THE VICINITY OF OPERATIONS (CONTINUED)

IUCN RED LIST DESIGNATION	NUMBER OF SPECIES	TYPE OF SPECIES
LOUISIANA PHOSPHATE OPERATIONS		
Endangered	1	Pallid Sturgeon
Vulnerable	1	West Indian manatee
Near Threatened	-	-

NOTE: Species listed as possibly affected by Louisiana operations are from Louisiana Department of Wildlife and Fisheries database and may not have been actually observed on or near Mosaic property. Avian species listed as affected or possibly affected by New Mexico and Saskatchewan operations are migratory species with potential migration patterns proximal to our operations in those geographies.

IUCN RED LIST DESIGNATION	NUMBER OF SPECIES	TYPE OF SPECIES
BRAZIL PHOSPHATE AND POTASH OPERATIONS		
Critically endangered	1	Brazilian merganser
Endangered	3	Brasilia tapaculo, crowned solitary eagle, vinaceous-breasted Amazon
Vulnerable	7	Bare-throated bellbird, channel-billed toucan, cycloramphus, white-bearded antshrike, giant anteater, sharp-tailed tyrant and southern tiger cat
Near Threatened	16	Azure jay, azure-shouldered tanager, black-fronted titi, blue finch, blue-winged macaw, festive coquette, golden-capped parakeet, greater crescent-chested puffbird, greater rhea, maned wolf, neotropical otter, saw-billed hermit, spot-breasted antvireo, white-banded tanager, white-breasted tapaculo, yellow-faced Amazon

NOTE: Please see our [2018 Environment Metrics Supplement](#) for a full list of IUCN “Least Concern” species in the vicinity of our operations. Species listed as possibly affected by Louisiana operations are from Louisiana Department of Wildlife and Fisheries database and may not have been actually observed on or near Mosaic property. Avian species listed as affected or possibly affected by New Mexico and Saskatchewan operations are migratory species with potential migration patterns proximal to our operations on those geographies. The pecos gambusia and western yellow-billed cuckoo were not necessarily observed near the Carlsbad facility, but they are listed by the Bureau of Land Management as confirmed or hypothetical species in the Carlsbad region. The U.S. Endangered Species Act (ESA) lists ¹These species as “endangered”
²These species are ESA listed “threatened”

306-1 Total water discharge by quality and destination

306-5 Identity, size, protected status and biodiversity value of water bodies and related habitats significantly affected by the organization's discharges of water or runoff

TOTAL WATER DISCHARGE 2018 (TONNES UNLESS OTHERWISE NOTED)

		2014	2015	2016	2017	2018
Phosphate Segment Discharges	Annual Outfall Discharges (,000 m3)	304,569	401,242	456,861	383,218	454,995
	Phosphorous Loadings	2,680	2,025	1,826	1,732	1,505
	Nitrogen Loadings	278	388	490	409	466
Mosaic Fertilizantes Segment Discharges	Annual Outfall Discharges (,000 m3)	—	—	—	—	164,803
	Phosphorous Loadings	—	—	—	—	681
	Ammonia Nitrogen Loadings	—	—	—	—	82

NOTE: Per location-specific permit conditions, our Brazil operations monitor water discharges for various other parameters not reported here. Please view our [2018 Environment Metrics Supplement](#) for more information.

RIVERINE BASINS WHERE MOSAIC OPERATES

WATER BODY/BASIN	BASIN SIZE (HECTARES)	RIVER LENGTH (KM)
Hillsborough River	175,000	95
Peace River	608,000	169
Alafia River	109,000	38
Little Manatee River	58,000	58
Myakka River	155,000	106
Mississippi River	322,500,000	3,370
Pecos River	11,500,000	1,490
Qu'Appelle	1,780,000	430
Jacupiranguinha River	2,568,100	60
Capivara River	2,209	93
Sal Stream	2,209	21
Fundo Stream	34,400	16
Mandaguari Stream	34,400	9
Salitre Stream	2,209,100	622
Bebedouro Stream	2,209,100	8
Bonito Stream	2,209,100	11
Limeira Stream	3,440,000	7
Imbé Stream	3,440,000	3
Inferno Stream	2,208,600	78
Grande River	258,300,000	1,360
Gameleira Stream	14,300,000	8
Seco Creek	14,300,000	6

In the Phosphates segment, no outfalls discharge directly into a designated protected area, although discharges occur in three riverine basins upstream of Outstanding Florida Waters (i.e. segments of Little Manatee River, Hillsborough River and Myakka River) and Florida Wild and Scenic Rivers (segment of Myakka River). As an overarching principle, water that falls within the active, operational footprint of Mosaic's phosphate mining and fertilizer production facilities is actively managed, used in our operations, treated if necessary and discharged through NPDES outfalls pursuant to water quality standards stipulated by permits. Discharges are monitored, sampled and analyzed regularly by Mosaic, with reports provided to regulatory agencies to demonstrate ongoing compliance with permit limitations.

In certain high precipitation events, off-site discharges of freshwater surface runoff are warranted and are approved in advance by the Saskatchewan Ministry of Environment and the Saskatchewan Water Security Agency. There were two such instances in 2018. Please see [MM3](#) for a discussion of our Potash segment's brine disposal methods.

None of our Brazil facilities discharge directly into designated protected areas. Effluents are regularly monitored, sampled, and analyzed by Mosaic, and reports are regularly provided to governmental environmental agencies in accordance with requirements.

306-2 Total weight of waste by type and disposal method

306-4 Weight of transported, imported, exported or treated waste deemed hazardous under the terms of the Basel Convention, and percentage of transported wastes shipped internationally

2018 WASTE GENERATED BY DISPOSAL METHOD (TONNES)

	INCINERATION	LANDFILL	TREATMENT	RECYCLE	OTHER	TOTAL
Phosphates	544	8,409	916	15,406	—	25,275
Hazardous	230	1,238	485	—	—	1,953
Nonhazardous	314	7,170	431	15,406	—	23,321
Potash	23	1,411	214	4,331	35	6,014
Hazardous	23	90	214	202	35	564
Nonhazardous	—	1,321	—	4,128	—	5,449
Mosaic Fertilizantes	50	46,629	13,296	33,163	1,014	94,151
Hazardous	37	398	1,475	1,287	726	3,923
Nonhazardous	13	46,231	11,821	31,876	288	90,229
Total	617	56,449	14,426	52,900	1,049	125,440

NOTE: "Other" disposal method includes combinations of co-processing, retort, treatment, incineration and/or deep well injection. Subtotals may not always add up to totals due to rounding. Our tracking of wastes across our business continues to improve. Legacy Brazil facilities previously reported under International Distribution segment are now reported under Mosaic Fertilizantes segment. The year-over-year decrease in Phosphates recycled wastes is primarily due to our recycling a significant amount of finished product during a warehouse clean out in 2017.

No hazardous wastes were shipped internationally.

MM3 Overburden, rock, tailings and sludge

MINING AND MINERAL PROCESSING SOLID WASTE GENERATED AND DISPOSAL METHOD (TONNES)

MATERIAL	2014	2015	2016	2017	2018	DISPOSAL METHOD
PHOSPHATES						
Overburden	154,240,684	139,197,603	142,792,323	126,608,107	120,461,664	Used for reclamation
Sand Tailings	37,078,556	40,007,843	41,395,971	39,221,004	37,790,316	Used for reclamation
Clay	15,588,902	19,544,716	19,289,693	18,416,751	15,573,299	Stored in surface impoundments and used for reclamation
Phosphogypsum	23,992,856	23,556,918	22,864,328	23,181,038	21,150,286	Managed in permitted phosphogypsum stack systems
POTASH						
Tailings (Salt)	11,285,000	9,511,314	9,987,260	12,961,397	13,522,972	Stored or recycled for commercial use
Brine	4,237,000	4,502,953	4,992,673	13,858,720	13,547,629	Deep well injection or evaporation
MOSAIC FERTILIZANTES						
Waste rock (sterile)	—	—	—	—	63,768,400	Stored and used for reclamation
Sand Tailings	—	—	—	—	19,169,629	Stored in tailings dams
Phosphogypsum	—	—	—	—	5,372,140	Stored or used in coproduct application
Brine	—	—	—	—	4,172,975	Evaporated or discharged

NOTES: This table reflects a revised 2017 phosphogypsum total due to a conversion error. Due to the composition of mineral deposits in Brazil, our newly acquired Mosaic Fertilizantes operations handle various mining and production wastes we have not historically reported here. Please review our 2018 Environment Metrics Supplement for more information.

In 2018, our Potash segment standardized the calculation methodology for brine, which explains the variance between the 2016 and 2017 reported brine values. There was no change to the operations process and the brine volumes were accurately reported.

306-3 Number and volume of significant spills

In 2018 we had a total of one release equal to or greater than 2,000 gallons.

ENVIRONMENTAL RELEASES > 2,000 GALLONS

BUSINESS SEGMENT	2014	2015	2016	2017	2018
Phosphates	6	3	8	5	1
Potash	6	3	8	2	—
Distribution/International	2	—	—	—	—
Mosaic Fertilizantes	—	—	—	—	—

NOTE: Table includes environmental releases equal to or greater than 2,000 gallons equivalent. Environmental releases meeting this criteria in 2018 included: Phosphates—(1) 100,000 gallons of stormwater released to water. In line with EHS's performance tracking and reporting, Distribution/International is included as a separate operating category. Facilities located in Brazil and Paraguay, which were previously part of the International Distribution segment, have been moved to Mosaic Fertilizantes line of this indicator following our 2018 acquisition of the phosphate and potash assets of Vale Fertilizantes. Our current reporting of this metric does not include sites that were acquired as part of that transaction; we plan to include them as part of our 2019 disclosure.

307-1 Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations

In [Form 10-K](#) and [10-Qs](#), Mosaic reports any environmental enforcement action that it has identified as potentially material to investors, or if not potentially material, as potentially meeting or exceeding a significance threshold of \$100,000. In 2018, there were no enforcement actions meeting that criterion.

Management Approach: Supplier Environmental Assessment

308-2 Significant actual and potential environmental impacts in the supply chain and action taken

In 2016, we worked with a third party to complete an assessment of our value chain, in part, to identify the environmental impacts associated with our top suppliers. The analysis included suppliers to which approximately 90 percent of our supply chain expenditures in North America were made, representing more than 3,500 suppliers. Through this exercise we determined that the environmental impacts associated with our supply chain are primarily associated with the purchase of manufactured ammonia—specifically, the greenhouse gas emissions associated with producing this material. We report those emissions in [305-3](#).

We also recognize the importance of reducing runoff of crop nutrients into waterways, which can contribute to impaired water quality and can also nourish algal blooms. Mosaic supports and promotes the 4R Nutrient Stewardship framework to achieve the agricultural benefits of fertilizer and reduce nutrient loss to the environment. Since 2004, Mosaic has invested over \$19 million with over 100 organizations on water-related initiatives, including nutrient stewardship. Our efforts have increased adoption of 4R practices on over 6.2 million acres in North America within the last 5 years.

We will continue to engage with suppliers in order to evaluate and report their performance, while identifying opportunities to mitigate and reduce their environmental impacts.

Management Approach: Employment, Labor/Management Relations, Diversity and Equal Opportunity

At Mosaic, the strength of our business relies on the commitment of an exceptional global team of employees. Whether working in our mines, distribution facilities or offices, our more than 12,500 employees are part of a global Mosaic team that is richly diverse in skills, experiences and backgrounds. Together, we are responsible, innovative, collaborative and driven.

Mosaic aims to be the employer of choice for a diverse and inclusive workforce. Our global talent investment philosophy is to provide competitive compensation and benefits, with flexibility to choose programs that best meet our employees' needs. Mosaic offers health, welfare and retirement benefits to all full-time employees and eligible dependents.

Mosaic offers competitive compensation and benefits in each of the company's significant locations of operation. Within each of the countries in which Mosaic operates, benefits provided or offered to our full-time employees may differ for various reasons, including:

- State or country mandated benefit laws that apply to Mosaic employees in a specific geography
- Labor agreements between Mosaic and labor organizations acting on behalf of represented employees
- Market-specific benefit programs or practices that exist within an area that Mosaic competes for labor
- The impact to employees of local or national tax laws regarding the treatment of company-sponsored benefits

Mosaic values collective bargaining as an important form of collaborative employee engagement. In addition, Mosaic is sensitive to the needs of its employees, and much consideration is placed on applicable notice periods for any such changes that may impact employees.

Mosaic's Equal Employment Opportunity and Nondiscrimination Policy provides equal employment opportunities to all Mosaic applicants and employees and other qualified persons without regard to race, religion, color, gender, national origin, age, disability, marital status, citizenship status, military or veteran status, sexual orientation, gender identity, genetic information, or any other legally protected status under applicable laws in countries where Mosaic employees work. The policy also provides that Mosaic is committed to maintaining a work environment free of discrimination. Mosaic's commitment applies to all terms and conditions of employment, including: recruiting and hiring, training and promotion, compensation and benefits, performance assessments, transfers, terminations, layoffs or recall from layoff, leaves of absence, and company-sponsored training and education.

Retaliation or reprisal toward an employee who has exercised their rights under this policy is strictly prohibited. Mosaic's [Code of Business Conduct and Ethics](#) reinforces this policy.

Our [Commitment to Inclusion](#) reinforces that Mosaic is focused on building a representative workforce that embraces the opportunities that diversity brings to the workplace.

Mosaic supports and participates in a variety of formal and informal channels through which employees can submit concerns or grievances, including an EthicsPoint hotline, biennial engagement survey, mediation, arbitration, and/or through other formal administrative tribunals such as the National Labor Relations Board and Equal Employment Opportunity Commission. Our collective bargaining agreements contain procedures for resolving grievances over the application or interpretation of such agreements, and Mosaic resolves labor grievances in accordance with the procedures outlined in those respective agreements.

401-1 Total number and rates of new employee hires and employee turnover by age group, gender and region

EMPLOYEES BY AGE GROUP, GENDER AND REGION

COUNTRY	<30		30-50		>50		TOTAL	
	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE
Australia	0	0	0	0	0	1	0	1
Brazil	185	952	507	3,881	32	630	724	5,463
Canada	61	230	190	1,168	53	516	304	1,914
China	6	8	43	91	1	9	50	108
India	1	5	6	45	0	1	7	51
Paraguay	4	18	4	38	0	4	8	60
United States of America	40	335	340	1,554	224	1,456	604	3,345
Subtotal	297	1,548	1,090	6,777	310	2,617	1,697	10,942
Total	1,845		7,867		2,927		12,639	

NOTE: Excludes long-term leaves, co-ops, seasonal and temporary employees. Employees considered to be on long-term leave are those away from work more than 180 days.

NEW HIRES BY AGE GROUP, GENDER AND REGION

COUNTRY	<30		30-50		>50		TOTAL	
	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE
Australia	—	—	—	—	—	—	—	—
Brazil	32	96	31	85	2	5	65	186
Canada	11	33	5	53	1	9	17	95
China	2	1	4	6	—	—	6	7
India	1	5	1	3	—	—	2	8
Paraguay	—	1	—	1	—	—	—	2
United States of America	12	76	30	98	4	20	46	194
Subtotal	58	212	71	246	7	34	136	492
Total	270		317		41		628	

NOTE: Excludes long-term leaves, co-ops, seasonal and temporary employees. Figures do not include employees who joined Mosaic as a result of the acquisition of the phosphate and potash fertilizer business of Vale S.A. in 2018.

EMPLOYEE TURNOVER BY AGE GROUP, GENDER AND REGION

COUNTRY	<30		30-50		>50		TOTAL	
	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE
Australia	—	—	—	—	—	—	—	—
Brazil	16	102	21	151	—	15	37	268
Canada	4	9	7	31	4	35	15	75
China	—	—	6	8	—	—	6	8
India	—	—	—	2	—	—	—	2
Paraguay	—	7	2	11	—	—	2	18
United States of America	10	53	35	142	16	127	61	322
Subtotal	30	171	71	345	20	177	121	693
Total	201		416		197		814	

NOTE: Excludes long-term leaves, co-ops, seasonal and temporary employees. Turnover totaled 11% in 2018. Turnover figures do not include employees layoffs that addressed redundancies following our early 2018 acquisition of the phosphate and potash operations of Vale, SA.

401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation

Mosaic provides competitive compensation and bonus opportunities for jobs in all disciplines and geographic markets based on company and individual performance. Additionally, Mosaic contributes toward retirement income benefits, which may include defined-benefit pension plans, defined-contribution plans or other supplemental retirement plans across our locations and countries. The majority of administrative, insurance and other costs associated with Mosaic-sponsored health and welfare plans is borne by us. Participation in the retirement plans is automatic in the United States and Canada. The defined-contribution plan is open to all, but it is not mandatory to participate.

EMPLOYEE BENEFITS (● = YES)

TYPE OF BENEFIT	UNITED STATES	CANADA	BRAZIL	PARAGUAY	INDIA	CHINA
Health Care	●	●	●	●	●	●
Life Insurance	●	●	●	●	●	●
AD&D Insurance	●	●			●	●
Disability Coverage	●	●	●	●	●	●
Employee Assistance Program	●	●	●	●	●	●
Defined-benefit Pension Plan	●	●	●		●	
Defined-contribution Savings Plan	●	●	●		●	
Annual Profit Sharing	●	●	●	●	●	●
Maternity Leave*	●	●	●	●	●	●
Paternity Leave*	●	●	●	●	●	●
Sickness Leave	●	●	●	●	●	●
Deferred Bonus and Deferred Pay	●		●			
Long-term Incentives	●	●	●	●	●	●
Stock Ownership	●					
Relocation Assistance	●	●	●	●	●	●
Flex Time Program	●	●	●			●
Formal Wellness Programs	●	●	●			●
Tuition Assistance/Education	●	●	●	●	●	●
Telecommute Program						●

*In most countries maternity and paternity leave are offered in accordance with applicable law. Mosaic provides additional paternity leave in India; additional maternity leave in Brazil; and, as of 2018, offers additional parental leave (maternity and paternity) in the United States.

402-1 Minimum notice periods regarding operational changes, including whether these are specified in collective agreements

In the United States, we adhere to or exceed the minimum notice requirements set by federal and state Worker Adjustment and Retraining Notification Act (WARN) laws. Additionally, in the U.S. some of Mosaic's labor agreements contain provisions of advance notice periods with respect to significant operational changes that impact employees. In most locations the exact notice requirement varies depending on circumstances surrounding the changes. In Canada, Mosaic adheres to or exceeds the minimum notice requirements set by the Saskatchewan Employment Act. In China, Mosaic adheres to or exceeds the 30-day notice requirements set by Article 41 of the Employment Contract Law (ECL). In Brazil, Mosaic adheres to the minimum 30-day notice requirement for dismissals without cause required by Brazilian Labor Law. In the other regions where we operate, Mosaic meets and usually exceeds the minimum notice required, which varies by local legislation and collective bargaining agreements.

MM4 Number of strikes and lock-outs exceeding one week's duration, by country

Mosaic has not been subject to organized labor actions, including strikes or lockouts of any duration, at any of its locations in the 2018 reporting period. Moreover, we have not had a strike by or lockout of our employees in facilities where Mosaic is the majority owner since our formation in 2004.

405-1 Diversity of governance bodies and employees

WORKFORCE BY AGE AND GENDER

AGE GROUP	FEMALE		MALE		TOTAL	
	COUNT	PERCENTAGE	COUNT	PERCENTAGE	SUBTOTAL	PERCENTAGE
30-50	1,090	8.6%	6,777	53.62%	7,867	62.2%
<30	297	2.4%	1,548	12.3%	1,845	14.6%
>50	310	2.5%	2,617	20.7%	2,927	23.16%
Total	1,697	13.4%	10,942	86.57%	12,639	100%

NOTE: Excludes long-term leaves, coops, seasonal and temporary workers. 13% of Mosaic's total workforce is female and 17% of the management workforce is female. Approximately 27% of the United States workforce is considered to be a member of a minority group. "Minority group" in the United States is defined as non-white ethnicity of any gender.

BOARD OF DIRECTORS BY AGE AND GENDER

AGE GROUP	FEMALE		MALE		TOTAL	
	COUNT	PERCENTAGE	COUNT	PERCENTAGE	SUBTOTAL	PERCENTAGE
30-50	—	—	1	7.7	1	8.3%
>50	2	16.7%	10	76.9%	12	92.3%
Total	2	15.4%	11	84.6%	13	100%

NOTE: Table represents age and gender information for Mosaic's 2018 Board of Directors. For more information, please view our [2018 Proxy Statement](#).

405-2 Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation

One of Mosaic's strategic priorities is to invest in people, and we are committed to providing the environment, development opportunities and compensation to ensure that Mosaic is a company where employees are proud to work and grow.

We are an equal opportunity employer, and our recruiting practices focus on matching the best possible candidate to the position. Mosaic uses salary ranges that are competitive with market pay ranges for positions of comparable responsibility, functional knowledge, impact and other compensable factors. Gender is not a factor when determining compensation. Each salary range has a minimum or threshold salary for a new hire, although Mosaic typically sets the actual salary above this minimum.

Management Approach: Occupational Health and Safety

We are dedicated to providing a safe, healthy and respectful work environment for an engaged, inclusive workforce. Mosaic's Environmental Health and Safety Management System, aligned to ISO 14001, OHSAS 18001 and ANSI-Z10, integrates internationally regarded best management practices into our operations while affirming our ongoing safe and environmentally responsible performance. We strive to continually improve Mosaic's management system through efforts such as annual self-assessments, which are reviewed by a combined internal and external consultant audit team.

Mosaic's safety management system is designed to identify, evaluate and control risks. This proactive approach allows us to understand the risks, take action and prevent incidents from occurring in the first place. Mosaic's proactive approach includes targets for risk reduction controls at all facilities which continues the drive toward zero injuries and incidents. Incident management is one of ten elements of the management system and focuses on thorough incident investigation resulting in corrective and preventative actions. Mosaic's best practice is to communicate incident investigation findings to ensure lessons learned are shared throughout the company.

Our updated [Sustainability Targets](#) include a goal to reduce incidents and injuries, and improve year-over-year performance. Globally, all Mosaic employees, service providers and contractors are held to the same high standards outlined in our [Code of Business Conduct and Ethics](#).

403-1 Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs

Mosaic has safety committees at a majority of our global operations, representing more than 95 percent of employees. All Mosaic facilities located in Brazil, the United States and Canada have formal joint safety committees. The role of these committees, which are composed of employees from all levels, is to promote safety awareness and reinforce a working environment that promotes connectivity, teamwork and productivity among employees while supporting Mosaic's pursuit of an incident- and injury-free workplace.

403-2 Type of injury and rates of injury, occupational diseases, lost days and absenteeism, and total number of work-related fatalities, by region and gender

403-3 Workers with high incidence or high risk of diseases related to their occupation

Mosaic follows United States Occupational Safety and Health Administration (OSHA) standards to calculate recordable injury frequency rates (RIFR) on a global basis. An OSHA recordable injury is an occupational injury that requires medical treatment that is more than simple first aid. The most common injuries are: cuts/lacerations/avulsions; fractures; sprains/strains; pain; and bruises/contusions.

Lost time incident frequency rate (LTIFR) calculates the frequency rate of lost time injuries. This measure is an indicator of incident severity. Lost days begin the day after the lost time incident occurs and calendar days are counted, with no exception for weekends, holidays, vacation or scheduled time off.

Employees who work in areas with elevated noise in the operational environment are at potential risk for hearing loss. To mitigate this risk, Mosaic uses engineering controls to reduce the noise of our equipment; where this cannot feasibly be accomplished, Mosaic requires the use of hearing protection or even double hearing protection.

Contractor safety is also a priority. We select, screen and audit contractors using the ISNetworld Rating—a global system in which contractors and suppliers report their safety performance and conformance to regulatory and internal health, safety and procurement requirements. In 2018 Mosaic implemented the use of the ISN Site Tracker Tool to further drive contractor safety improvements, improve accountability and accurately track safety performance.

There were no work-related fatalities in 2018.

RECORDABLE INJURY FREQUENCY RATE (RIFR) 2018

	EMPLOYEE	CONTRACTOR	TOTAL
United States	0.66	0.66	0.66
Canada	0.40	0.57	0.47
Brazil	0.26	0.13	0.20
International	0.0	0.0	0.0
Total	0.50	0.51	0.50

NOTE: Safety performance data for Brazil includes legacy Mosaic blending and distribution facilities but it does not include data from recently acquired Mosaic Fertilizantes facilities. We will begin reporting those facilities in 2019.

LOST TIME INCIDENT FREQUENCY RATE (LTIFR) 2018

	EMPLOYEE	CONTRACTOR	TOTAL
United States	0.09	0.09	0.09
Canada	0.04	0.13	0.08
Brazil	0.13	—	0.07
International	—	—	—
Total	0.08	0.08	0.08

NOTE: Safety performance data for Brazil includes legacy Mosaic blending and distribution facilities but it does not include data from recently acquired Mosaic Fertilizantes facilities. We will begin reporting those facilities in 2019.

ABSENTEEISM RATE 2018

EMPLOYEE	TOTAL
Phosphates*	3%
Potash*	5%
Mosaic Fertilizantes**	5%

NOTE: Absenteeism rates reported here represent absenteeism across diverse leave categories—not only those related to occupational health, safety or diseases. In China and India, all full-time Mosaic employees are salaried, and absenteeism is accounted for per their respective HR policies.

*Data for hourly and salary non-exempt employees only.

**Mosaic Fertilizantes percentage represents absenteeism for employees in Brazil and Paraguay.

403-4 Health and safety topics covered in formal agreements with trade unions

Mosaic conducts business activities in a manner intended to protect the health and safety of its employees, contractors, customers and communities. One hundred percent of our union contracts in the United States, Canada and Brazil cover health and safety topics. Please see **102-41** for more information on the number of employees covered by collective bargaining agreements. Topics covered include supply of personal safety equipment, medical examinations, accident reporting and investigation, rights to refuse unsafe work and health and safety committees.

Though rare, emergencies can occur in our business, and the ability to respond promptly and effectively is critical. Mosaic's overarching approach to crisis management includes risk anticipation and mitigation, site-specific emergency response plans, and routine crisis simulation drills involving Mosaic employees from various functions and emergency response professionals from the communities where we operate. Our internal crisis management intranet site outlines response plan specifics, including roles, procedures, guidelines and protocols for handling crises and communicating with stakeholders.

Management Approach: Training and Education

One of Mosaic's strategic priorities is to invest in people, and we are committed to providing the environment, development opportunities and compensation to ensure that Mosaic is a company where employees are proud to work and grow.

Mosaic employees are encouraged to continually learn and improve their skills. With management support, we offer a companywide educational reimbursement program to help employees in each of our operating countries better meet their current job responsibilities, as well as prepare for future career opportunities within our company. Our internal training opportunities also support the continuous development of Mosaic employees at all levels:

- Leadership
- Professional and career development
- Environmental, health and safety (EHS) training
- Equipment and maintenance training
- Continuous improvement

404-1 Average hours of training per year per employee by gender and employee category

TRAINING AND EDUCATION 2018 (TRAINING HOURS BY EMPLOYEE GROUP)

COURSE TITLE	HOURLY	SUPPORT	PROFESSIONAL	LEADERSHIP	STRATEGIC	TOTAL TRAINING IN HOURS
Leadership, Professional Development and Function Training (HR, IT, Finance and Commercial for all EEs)	2,378	1,694	13,901	5,919	496	24,388
Legal Compliance Training	2,999	617	2,781	1,239	184	7,820
Topics in Anti-Corruption, FCPA, Business Conduct and Ethics	30	185	437	171	29	852
EHS and Operations Training						
Phosphates	108,260	4,235	21,855	8,127	617	143,094
Potash	112,114	1,914	22,776	10,007	691	147,502
International and Corporate Headquarters	78,606	10,266	47,902	17,631	2,209	156,614
Total Hours						479,418
Hours per employee (13,654 number of EEs)						35

NOTE: We are in the process of integrating training systems following 2018's acquisition of Mosaic Fertilizantes. Some training hours may have been inadvertently excluded, hence the year-over-year reduction in training hours per employee.

404-2 Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings

As part of Mosaic's priority to invest in people, we offer core leadership programs designed to engage and empower employees; develop leadership skills and assist with managing teams; and drive strong business results. Mosaic offers training courses to developing leaders that are mapped to Mosaic's ten leadership model competencies. In 2018, 332 first-line leaders participated in Leadership Fundamentals Program; 16 mid-level managers participated in a Leadership Catalyst Program; and 31 employees identified participated in Mosaic's Accelerated Development Program.

As it relates to career transitions, Mosaic provides employees with helpful planning tools, calculators, articles, videos and webcasts, in addition to optional services provided by our third-party vendors to help plan for retirement. When a reduction in our workforce occurs, we provide comprehensive career transition services to employees to help ease the stress that accompanies job loss. In 2018, Mosaic provided eight employees with 270 hours of third-party training and coaching to help manage career transitions.

404-3 Percentage of employees receiving regular performance and career development views, by gender and employee category

As part of our strategic priority to develop, engage and empower our people, we have a performance management process called EDGE: Evaluating, Developing and Growing Excellence. Our performance management process has evolved to include scaled competencies, goal alignment, and an emphasis on employee and career development. In addition, we offer tuition reimbursement programs to support continued education for Mosaic employees. More than 105 employees are currently enrolled in Mosaic's tuition reimbursement program.

EMPLOYEES RECEIVING REGULAR PERFORMANCE AND CAREER DEVELOPMENT REVIEWS BY GENDER 2018

	FEMALE	MALE	TOTAL
Performance Reviews Given	836	2,176	3,012
Percentage of Reviews Received	95%	95.9%	95.62%

NOTE: Figures exclude employees who were terminated before the year-end review deadline of mid-February 2019.

Management Approach: Non-discrimination, Freedom of Association and Collective Bargaining, Child Labor, Forced or Compulsory Labor and Rights of Indigenous Peoples

As a signatory to the United Nations Global Compact, The Mosaic Company is committed to the protection and advancement of human rights. Mosaic's [Code of Business Conduct and Ethics](#) forms the basis of our [Commitment to Human Rights](#).

406-1 Total number of incidents of discrimination and corrective actions taken

In 2018 there were a total of 16 incidents involving complaints of discrimination that were filed with external agencies:

- In the United States, there were 10 charges filed with external agencies, primarily the United States Equal Employment Opportunity Commission (EEOC). Of these, nine were closed in 2018: six were dismissed without cause; two were voluntarily withdrawn as part of a settlement agreement without an admission of wrongdoing by Mosaic; one remains without a decision because the complainant requested a right to sue in court. Two charges remain open pending determination. Two prior charges were closed but proceeded to litigation; one of those is pending settlement (as of December 2018) while the other is active.
- In Brazil and Paraguay, there were six individual labor claims filed by employees against Mosaic in 2018. Of these, two were closed during 2018 (one was deemed groundless and in the other, Mosaic hired back the employee and paid compensation). Four of the claims remain open.

In 2018 there was one substantiated internal report of discrimination:

- In the United States, there was a single internal complaint that was investigated and substantiated. The offending employee resigned in lieu of termination and Mosaic provided enhanced training on the need for timely reporting of incidents.

407-1 Operations and suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and measures taken to support these rights

Mosaic does not have any operations in which the right to exercise freedom of association and collaborative bargaining are identified as a significant risk. Mosaic does not discriminate based on association, per our Commitment to Human Rights, which is guided by the Universal Declaration of Human Rights (UDHR), the most widely recognized definition of human rights and the responsibilities of national governments; the International Labour Organization (ILO) Declarations on Fundamental Principles and Rights at Work; and the Organization for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises. Per our Commitment to Human Rights, Mosaic aims to strengthen and enforce human rights in our policies and operations globally, including in our supply chain.

408-1 Operations and suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor

409-1 Operations and suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures taken to contribute to the elimination of all forms of forced or compulsory labor

Mosaic does not have any operations that are identified as a significant risk for child labor or forced or compulsory labor practices. Mosaic abides by all applicable child labor laws, as well as our global hiring and employment policies. In the United States and Canada we do not employ anyone under the age of 18. We do not tolerate forced or compulsory labor. Mosaic complies with all statutory requirements in the locations where we operate, as well as our own employment policies, including our Commitment to Human Rights, which is guided by the UDHR, the most widely recognized definition of human rights and the responsibilities of national governments; the ILO Declaration on Fundamental Principles and Rights at Work; and the OECD Guidelines for Multinational Enterprises. Per our Commitment to Human Rights, Mosaic expects all of our business partners to comply with labor and employment laws in the countries where we operate, including laws pertaining to child labor and forced labor.

411-1 Total number of incidents of violations involving rights of indigenous peoples and actions taken

MM5 Number of operations taking place in or adjacent to indigenous peoples' territories

Although Mosaic does not conduct any operations on, or immediately adjacent to, any lands of Indigenous Peoples, in Canada there are four First Nations reserves (Cowessess First Nation, Ochapowace First Nation, Kahkewistahaw First Nation, and Sakimay First Nation) that are located within 100 kilometers of our Esterhazy, Saskatchewan potash mining operations. In addition, Cowessess First Nation leases approximately 160 acres of mineral lands to Mosaic for potash mining purposes, and Mosaic may from time to time enter into additional agreements to lease mineral rights owned by other First Nations. Mosaic has had no reported incidents related to violations involving rights of Indigenous Peoples for the period covered in this report.

In Brazil there are three Quilombola communities—made up of approximately 2,000 people—residing near the company's Potash operations in the state of Sergipe. There were no reported incidents related to violations of the Quilombolas' rights in the period covered by this report. As a legal requirement prior to future Potash project development in Sergipe, Mosaic participated in a process with the Quilombola population to develop the Basic Environmental Plan for Quilombos (PBAQ) of Terra Dura, Patioba and Canta Galo. This collaborative process, as well as the outcome, were overseen and validated by public authorities.

Management Approach: Local Communities

Our local communities are our homes, and we have a vested interest in their sustainability. We understand that for Mosaic to prosper, so must our communities. We support formal and informal communication channels to connect our employees, communities, partners and customers. Examples include our Community Advisory Panels (CAPs) in Central Florida, as well as regional and international microsities intended as open lines of communication between Mosaic and local communities.

413-1 Percentage of operations with implemented local community engagement, impact assessments, and development programs

In alignment with Mosaic's Environment, Health and Safety policies, we are committed to conducting all business activities in a manner that protects the environment and the health and safety of our employees, our contractors, our customers and the public.

Our guiding principles—which state that we are responsible, innovative, collaborative and driven—define how we conduct business, how we interact with colleagues, and how we treat our communities and planet. Accordingly, 100 percent of our operations have impact assessment and development programs. We employ a variety of approaches to systematically assess and manage the diverse impacts of industry on the various communities in which we operate.

SUSTAINING OUR GLOBAL AND LOCAL OPERATIONS

We serve customers in approximately 40 countries. We mine phosphate rock in Florida and Brazil. We process rock into finished phosphate products at facilities in Florida, Louisiana and Brazil.

We mine potash in Saskatchewan, New Mexico and Brazil. We have other production, blending or distribution operations in Brazil, China, India and Paraguay, and we are majority owner of a strategic equity investment in a phosphate rock mine in the Bayovar region in Peru. We also have a strategic equity investment in a joint venture that operates phosphate rock mine and chemical complexes in the Kingdom of Saudi Arabia. View a list of [our locations](#) (64 as of the date of this report).

Although Mosaic continues to refine and adapt community investment programs throughout South America and Asia, due to the nature of our business and potential impact, this report heavily emphasizes Central Florida in the United States; Saskatchewan, Canada; and Brazil.

Our operations in Saskatchewan, Central Florida and Brazil work diligently to engage local communities. Mosaic's engagement within local communities includes monthly meetings with a series of CAPs, civic organizations, elected officials, civil servants and other opinion leaders. Mosaic reaches the broader community through print, broadcast, billboard and digital ads, news and social media outlets, direct mail, and public education initiatives. When the business plans to expand operations, we host community forums and participate in public hearings convened by local and regional governments.

ASSESSING OUR ENVIRONMENTAL IMPACT

Mosaic is committed to conducting and reporting the results of environmental impact assessments. In April 2013, the final Areawide Environmental Impact Statement (AEIS) on Phosphate Mining in the Central Florida District was released by the U.S. Army Corps of Engineers (ACOE) for public review. In August 2013, the AEIS for continued phosphate mining in the Central Florida Phosphate District was finalized. Administered by the ACOE in compliance with the National Environmental Policy Act, this process analyzed the environmental scope and potential impacts of phosphate mining in Central Florida.

Additionally, as it becomes available, information about our permit applications is posted online on microsites targeted to each permitting county in Central Florida. This transparency provides the public with a clearer view of the regulatory process for permitting and gives local residents the ability to communicate directly with the experts overseeing a given project.

The Mosaic Potash segment conducts regular environmental impact assessments, reporting the findings to the Saskatchewan Ministry of Environment. All environmental impact assessments have been submitted and approved to date. Additionally, the Mosaic Potash facilities in Saskatchewan conduct thorough biological assessments of proposed expansion sites, such as the assessments for the tailing expansion at the Colonsay and Esterhazy mines, as well as the K3 site at Esterhazy. Each of these assessments includes field surveys to identify rare species of plants and animals of special concern to identify if mitigation programs are required.

DEVELOPING AND CONSULTING IN OUR COMMUNITIES

The Mosaic Company, The Mosaic Company Foundation and The Mosaic Institute in Brazil make investments in our global communities through philanthropic grants, employee engagement and in-kind donations. Combined contributions in 2018 were more than \$12 million.

In 2018, Mosaic operations in Florida committed more than \$4.8 million, and operations in Saskatchewan committed more than \$4.3 million to enrich and improve communities where we have offices and operations. In Brazil we invested approximately \$480,000 in local communities.

Mosaic employs regional, full-time public affairs (PA) staff to support all communities where we have an operating footprint. Mosaic PA staff are committed to maintaining an open dialogue with the people in our communities, assessing local needs and building partnerships designed to improve community vibrancy for local residents. Independent CAPs help facilitate this work. Underwritten by Mosaic, CAPs serve as a forum for open discussion among representatives of the local community, and provide a place for companies to discuss community response to industry developments and plans.

RECOGNIZING INDIGENOUS RIGHTS

In some locations, there are cultural implications to our business that Mosaic addresses through community engagement. Mosaic recognizes the significance of building relationships with First Nation and Métis organizations throughout Saskatchewan. For example, Mosaic partners with the Saskatchewan Indian Institute of Technologies' Mining Industry Prep Programs, which are based in Saskatoon, Yorkton and Regina, to prepare Saskatchewan's Indigenous workforce for careers in mining. We strive to be a thoughtful and engaged neighbor who invests carefully and generously, and, through working with First Nations and Métis communities, we identify strategic opportunities to target grant funding to initiatives and projects that are important to the growth and sustainability in the areas where we operate. In 2016, the potash business segment realigned aboriginal engagement internally by merging the function within Public Affairs in order to create a more holistic outreach approach. Today, our engagement with aboriginal communities blends community investment initiatives with information on career opportunities, environmental responsibility, and opportunities for suppliers by connecting one-on-one with aboriginal communities and organizations, ensuring the right connections within Mosaic are made.

In Brazil we engage Quilombola communities near our potash operations in Sergipe in cultural and educational initiatives aimed at achieving several outcomes: administrative and management training for community leaders and associations; prevention of sexual exploitation of children and adolescents; reduction and avoidance of alcohol and drug use; and support for traditional African festivals. Please see [411-1](#) and [MM5](#) for more information.

ENGAGING OUR STAKEHOLDERS

Mosaic is committed to stakeholder engagement and public outreach efforts. Through face-to-face meetings, social media, government relations, facility tours and more, Mosaic connects with stakeholders to keep them well informed and engaged with our mission to help the world grow the food it needs.

- Mosaic employees conduct tours of mines and manufacturing facilities for local, state and federal elected officials and staff, customers, investors, students, community leaders, the media, and nonprofit and civic groups throughout the year.
- Mosaic has an engaged social media presence (Twitter, Facebook, YouTube). These media enable us to share information with the general public and engage in conversations about our business, making thousands of impressions on users and community members.
- Additionally, Mosaic manages micro websites in Florida in support of future permitting, with the goal of being transparent with the general public. These sites invite the public to be engaged with the permitting process, review maps of the proposed mining areas, ask an expert, and submit questions about our activities in and around their communities.
- Mosaic is committed to being an engaged business partner. Mosaic regularly engages its customers in crop nutrient education and business management principles through various events, such as Mosaic's AgCollege, which hosts approximately 250 of Mosaic's strategic customers from the United States, Canada, Mexico, Argentina, Brazil, Australia, Chile, China and India for the premier education, personal growth and leadership development event for fertilizer retailers.
- As a member of The Fertilizer Institute, Fertilizer Canada, the Saskatchewan Mining Association, the Saskatchewan Potash Producers Association and Brazilian Mining Institute, Mosaic presents important information to government groups and decision-makers who directly impact operations, our current expansions, and our investments in our communities.
- In all regions where we have operations, Mosaic participates in ongoing consultation with government, covering topics such as operations updates, the need for infrastructure, consistency surrounding tax, partnership opportunities and Mosaic's approach to sustainability.
- Stakeholders may reach Mosaic in several different ways:
 - Send comments or questions regarding this report to: mosaic.sustainability@mosaicco.com
 - Contact our Board of Directors via written communication in care of the General Counsel at the address of the Company's executive offices, or by e-mail: directors@mosaicco.com

413-2 Operations with significant actual and potential negative impacts on local communities

Mosaic provides a great number of economic and social benefits to the local communities in which it operates. However, as with all mining activities, the extraction and beneficiation of phosphate and potash to meet the global demand for mineral fertilizer has the potential to cause environmental impacts. One such impact at our mining facilities in Central Florida is the loss of farm output due to farmland being used for mining. The AEIS noted that Mosaic's mining operations, as forecast for 2011 to 2050, will have a net positive economic impact on the local economy. Any economic effects from losses in farm output would be more than made up for by higher paying employment and economic activity resulting from mining.

Mosaic operates in a highly regulated and monitored industry. We work closely with state/provincial and federal officials on operations, expansions and sales to ascertain the environmental impact of industry activities on local communities. Through this collaboration, Mosaic has identified and implemented mitigation opportunities that safeguard local communities from potential negative impact. In Brazil we work closely with communities and local public authorities to communicate risks and safety precautions related to mining dams. These efforts include the formation of action groups that will be trained to recognize and act in emergency situations. For more information on actual or potential impacts, please see the discussion of risk factors in our [2018 Form 10-K Report](#), page 27.

MM6 Number and description of significant disputes relating to land use, customary rights of local communities and indigenous peoples

MM7 The extent to which grievance mechanisms were used to resolve disputes relating to land use, customary rights of local communities and indigenous peoples, and outcomes

In our Potash and Mosaic Fertilizantes businesses, there were no disputes related to the land use or customary rights of local communities and indigenous people in 2018.

As it relates to our Phosphates business, we rely on numerous permit approvals to expand our operations or extend operations into new areas. Occasionally, counties and other parties oppose the issuance of some of those required permits by providing comments and live testimony at public hearings, or initiating administrative or legal action. We proactively engage in an interactive dialogue with stakeholders, including local communities and interest groups, through means such as our Internet site and community microsites, tours of plants and mines, community advisory panels, town halls, and/or open houses. When significant disputes arise—defined here, for our Phosphates business, as administrative challenges to state-issued permits and litigation filed in federal and state courts—we resolve them through the appropriate channels.

For more information on operating requirements and impacts, and the phosphate mine permitting process in Florida, please see our [2018 Form 10-K](#).

Management Approach: Public Policy

As one of the world's leading crop nutrient companies, Mosaic has a responsibility to be actively engaged in the promotion of sound and sustainable public policies. We proactively educate all levels of our employees and government officials on the key issues our company and operations face, our value to operating communities, and our vital role in the world's food production.

Mosaic supports elected officials, candidates for public office, and political committees that are supportive of Mosaic's mission and share our views on important issues, such as maintaining a strong North American manufacturing and mining base, recognizing the importance of crop nutrients in maintaining domestic and global food security, and supporting reasonable science-based regulation with responsible environmental stewardship.

Mosaic is a member of organizations such as [The Fertilizer Institute](#), which represents the public policy needs of the fertilizer industry in the United States. Please see [102-12](#), [102-13](#) for a list of the industry organizations of which we are members.

415-1 Total value of political contributions by country and recipient/beneficiary

Amounts of political contributions are reported based on when Mosaic issued the check, which in some cases may be in a different year than when the check was delivered and reported by the receiving candidate or organization. Contribution levels vary in accordance with election cycles in local and regional communities where we operate.

POLITICAL CONTRIBUTIONS (U.S. DOLLARS)

	2014	2015	2016	2017	2018
United States	154,400	217,139	230,570	252,050	626,614
Canada	1,200	9,936	48,630	11,400*	10,713*

NOTE: United States political contributions include both "hard" and "soft" money donations, with contributions made from Mosaic Company Political Action Committee (PAC) included in the United States total. 2018 in-kind donations for the United States totaled approximately \$494. The increase in our United States political contributions this year reflects a 2018 election cycle in which most of Florida's Senate and House offices were up for election, as well as all four Florida statewide elected offices.

*The Canada figures for 2018 were converted to USD using the currency exchange rate on December 31 of the respective calendar year. Since the figures were not converted on the actual date of the contribution, the amount in USD on the date of the contribution may differ slightly from what is reported here.

MM9 Sites where resettlements took place, the number of households resettled in each, and how their livelihoods were affected in the process

Mosaic's potash and phosphate operations are well established mining regions with 50-plus years of operations. Mosaic purchased private properties in the vicinity of our operations in 2018, but no resettlements of communities in the United States or Canada took place. In Brazil, Mosaic purchased two private properties in the vicinity of our operations in Catalao, resulting in the resettlement of two households.

Mosaic has community relations managers who communicate potential impacts from our operations effectively to community associations. Community relations managers also work in conjunction with our land management office to address any questions or concerns raised by the community. Our Potash segment's Land and Minerals Department works with individual landowners to ensure the appropriate level of consultation is employed, as is required by provincial legislation and internal policy.

MM10 Number and percentage of operations with closure plans

Mosaic's phosphate mining is a land intensive operation. As such, our mine sites have to go through a detailed permitting process that involves determination and approval of ultimate closure, post-closure care and/or reclamation of our facilities. View [Land & Reclamation](#) for specific details of our efforts.

Mosaic has plans in place as required by governmental regulations for the closure and post-closure care of our phosphogypsum management systems at eight former and current phosphoric acid manufacturing plants in Florida and Louisiana. Similarly, Mosaic has plans in place as required by governmental regulations for the closure and post-closure care of all its Carlsbad and Saskatchewan mining operations. In Brazil we have closure plans in place as required by governmental regulations for the closure and post-closure care of all production facilities, with the exception of one, which is currently under review as part of a lease renewal process with the government.

For specific details on our estimated asset retirement obligations, refer to our [2018 Form 10-K Report](#) (F-20).

Management Approach: Customer Health and Safety and Marketing and Labeling

Mosaic's Belle Plaine facility has earned the Product Stewardship Excellence certification from the International Fertilizer Association's (IFA) Protect & Sustain Product Stewardship initiative. This certification covers the product life cycle including how products are produced; and how they are developed, sourced, stored, transported and used.

Communications are directed up and down the value chain, such as supplier certification requirements as part of sourcing and procurement of inputs, (material) safety data sheets (M/SDS), labels, registrations, quality/traceability information, training and educational materials.

Mosaic's research and development processes include internal and external research and science-based data generation to advance product advocacy and customer results.

Finally, process improvements include an Environmental Health and Safety Management System that is aligned to ISO 14001/OHSAS 18001 and ANSI-10, enterprise mechanical integrity programs and contractor accountability programs.

We believe Mosaic's products are among the most responsibly sourced in the world, and we are committed to the sustainable manufacturing of our products. For example, in 2015, Mosaic developed improved raw material sourcing guidance for sulfuric acid and zinc to prevent impacts to our products with trace metals.

416-1 Assessment of the health and safety impacts of product and service categories

Mosaic has a dedicated agronomy team that conducts field trials to evaluate the performance of our products and promote and support 4R Nutrient Stewardship. In 2018, we conducted 305 small-plot trials in Argentina, Australia, Brazil, Chile, China, Canada, Europe, India, Latin America (Mexico to Peru) and the United States.

EDUCATIONAL TOOLS

Mosaic supports an educational initiative to help the industry understand fertilizer and best management practices.

[CropNutrition.com](#) is a resource for retailers, growers, crop consultants, universities and media members seeking to better understand soil science, grow healthier crops, and increase productivity and yield—sustainably. Retailers and growers benefit from Mosaic sharing information that will allow them to think progressively about crop fertility.

INDUSTRY INITIATIVES

4R Nutrient Stewardship (4Rs) is about doing everything “right” in applying fertilizer and effectively reducing agriculture’s potential for negative externalities. 4R Nutrient Stewardship encompasses science-based fertilizer best management practices to achieve specific cropping system goals, including environmental protection. To achieve those goals, the 4Rs framework promotes a focus on the Right nutrient source, at the Right rate, at the Right time, and in the Right place. Please see [4R Nutrient Stewardship](#) for more information.

PARTNERSHIPS

Mosaic established and continues to fund the [Mosaic Fertiliser Technology and Research Centre](#) at the University of Adelaide, Australia. The centre focuses on soil chemistry and fertilizer technology, and uses the latest technology to develop innovative fertilizer formulations to improve nutrient use efficiency.

Mosaic also has a long-term partnership with a globally recognized plant nutrition expert at Sabanci University in Turkey, whose research focus is balanced crop nutrition and nutrient interactions conducted through greenhouse experiments.

417-1 Requirements for product and service information and labeling

One hundred percent of Mosaic’s products are subject to labeling requirements. We comply with safety, environmental, labeling and registration required by country and local governments where we sell and distribute fertilizer, animal feed and industrial products. Where United States standards are more stringent, we follow those more rigorous standards on the products that we produce both in the United States and for export.

Mosaic provides the required country, state and local product documentation for all shipments. This includes detailed labels, data specification sheets and a safety data sheet (SDS) for all products. These documents provide information about proper product handling, safety precautions and guaranteed analysis. Situations requiring disposal are also addressed in the SDS. For product undergoing vessel transport, the SDS includes certification that the discharge of cargo hold rinsate is not harmful to the marine environment.

As it relates to safe use of our products, Mosaic promotes customer education following the [4R Nutrient Stewardship](#) framework of the Right nutrient source, applied at the Right rate, at the Right time and at the Right place. Our agronomists share this message worldwide.

417-2 Incidents of non-compliance concerning product and service information and labeling

Mosaic has systems to manage, track and monitor incidents related to noncompliance with regulations and voluntary codes concerning product and service information and labeling. We are committed to quality and responsible labeling. We investigate all questions or claims about the labeling or guaranteed analysis of our products and work with the customer and/or appropriate agency to resolve any claims that arise. In 2018, the sum of claims that resulted in penalties totaled less than \$5,000.

View online.

mosaicco.com/2018stateofthebusinessreport

Learn more.

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We support and promote 4R Nutrient Stewardship:
Right Source, Right Rate, Right Time, Right Place.