

# 2021 Environment Metrics Supplement

The Mosaic Company's 2021 Sustainability Disclosure has been prepared in accordance with the GRI Standards: core option. This supplement provides additional environmental metrics, not covered under the GRI framework, that some stakeholders request as part of their review of our performance. We encourage stakeholders to read this supplement in conjunction with our [2021 Sustainability Disclosure and GRI Index](#) and [2021 ESG Performance Summary](#).

2021 Global Water Withdrawals by Segment						
Total Water use by Business Segment (,000 m3)						
Business Segment	Municipal	Reclaimed Water	Groundwater	Surface Water	Total	Total Withdrawal Intensity
Phosphate	620	1,896	54,985	15,2034	209,535	0.0286
Potash	0	287	5,790	12,695	18,772	0.0023
Mosaic Fertilizantes	96	0	7,120	44,527	51,743	0.0120
Distribution	21	6,407	1,076	0	7,504	N/A
<b>Mosaic Total</b>	<b>737</b>	<b>8,590</b>	<b>68,971</b>	<b>209,256</b>	<b>287,554</b>	<b>0.0429</b>

Note: Phosphate surface water withdrawals include once through cooling water totals. Total water intensity value measured in megaliters per tonne of finished product. Values include all water withdrawals and differ from Mosaic's freshwater intensity reduction target, as reported in Mosaic's State of the Business Report. Phosphate surface water includes seawater withdrawn at our Peru site. 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. Though Distribution is not its own reporting segment, our distribution facilities do consume water in their operations, hence our including the volumes here. Intensity for Distribution facilities is not available using our methodology for calculating intensity since they do not produce finished product tonnes.

# Energy and Emissions

2021 Purchased Energy Intensity by Segment (GJ/Finished Product Tonnes)	
Business Segment	
Phosphate	0.89
Potash	0.39
Mosaic Fertilizantes	0.82
<b>Mosaic Total</b>	<b>0.64</b>
<p>Note: Energy totals in this table include purchased electricity only. Intensity for Distribution facilities is not available using our methodology for calculating intensity since they do not produce finished product tonnes.</p>	

2021 Total Energy Intensity by Segment (GJ/Finished Product Tonnes)	
Business Segment	
Phosphate	3.05
Potash	2.62
Mosaic Fertilizantes	2.47
<b>Mosaic Total</b>	<b>2.75</b>
<p>Note: Energy values in this table are inclusive of energy generated through cogeneration. Companywide values include total energy and differ from Mosaic's energy intensity reduction target, as reported in Mosaic's State of the Business Report. Intensity for Distribution facilities is not available using our methodology for calculating intensity since they do not produce finished product tonnes.</p>	

## GHG Intensity Metrics

2021 GHG Intensity by Segment (tonnes CO <sub>2</sub> e/Finished Product Tonnes)								
Business Segment	Total GHG <sup>1</sup>	Direct GHG <sup>1</sup>	Indirect GHG <sup>1</sup>	Total CO <sub>2</sub>	Direct CO <sub>2</sub>	Indirect CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O
Phosphate	0.313	0.230	0.084	0.169	0.086	0.084	0.00	0.00
Potash	0.181	0.113	0.068	0.113	0.045	0.068	0.00	0.00
Mosaic Fertilizantes	0.172	0.143	0.029	0.207	0.178	0.029	0.00	0.00
<b>Mosaic Total</b>	<b>0.229</b>	<b>0.16</b>	<b>0.07</b>	<b>0.15</b>	<b>0.09</b>	<b>0.07</b>	<b>0.00</b>	<b>0.00</b>

Note: <sup>1</sup>Total, Direct and Indirect GHG values are measured in tonnes CO<sub>2</sub>e per tonne of finished product. Summation of parts may be different from total due to rounding. Companywide values differ from Mosaic's GHG reduction target, as reported in Mosaic's State of the Business Report. Intensity for Distribution facilities is not available using our methodology for calculating intensity since they do not produce finished product tonnes.

## Absolute GHG Metrics

2021 Absolute GHGs by Segment (million tonnes CO <sub>2</sub> e, except CH <sub>4</sub> and N <sub>2</sub> O)								
Business Segment	Total GHG <sup>1</sup>	Direct GHG <sup>1</sup>	Indirect GHG <sup>1</sup>	Total CO <sub>2</sub>	Direct CO <sub>2</sub>	Indirect CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O
Phosphate	2.30	1.68	0.61	1.24	0.63	0.61	160	6
Potash	1.49	0.93	0.56	0.93	0.37	0.56	19	2
Mosaic Fertilizantes	0.74	0.61	0.13	0.89	0.77	0.13	177	11
<b>Mosaic Total</b>	<b>4.53</b>	<b>3.23</b>	<b>1.30</b>	<b>3.06</b>	<b>1.76</b>	<b>1.30</b>	<b>356</b>	<b>19</b>

Note: <sup>1</sup>Total, Direct and Indirect GHG values are measured in million tonnes CO<sub>2</sub>e; CH<sub>4</sub> and N<sub>2</sub>O are presented in tonnes. Summation of parts may be different from total due to rounding. CO<sub>2</sub> emissions from Biofuels is 0.16 million tonnes CO<sub>2</sub> from our Mosaic Fertilizantes facilities.

## Other Emissions

2021 Other Emissions by Segment (Tonnes)										
Business Segment	NO <sub>x</sub>	CO	PM	SO <sub>2</sub>	VOC	NH <sub>3</sub>	FL	H <sub>2</sub> S	SAM	HF
Phosphate	1211	429	1237	10987	133	222	91	17	212	457
Potash	1672	534	3710	432	101	0	0	0	0	0
Mosaic Fertilizantes	1407	0	615	5514	0	10	104	0	109	0
<b>Mosaic Total</b>	<b>4,289</b>	<b>963</b>	<b>5,563</b>	<b>16,932</b>	<b>233</b>	<b>232</b>	<b>195</b>	<b>17</b>	<b>321</b>	<b>457</b>
<p>Note: Values are presented in tonnes. Due to regulatory reporting timelines, this information is not available for the reporting year until the third quarter of the year. We will update here, and in our annual sustainability disclosure when it is available.</p>										

# Effluents and Waste

2021 Water Discharges– Mosaic Fertilizantes (tonnes)	
Fluoride	141
Biochemical Oxygen Demand	289
Chemical Oxygen Demand	1,789
Dissolved Solids	17,548
<p>Note: Per location-specific permit conditions, our Brazil operations monitor for various parameters in operational water discharges. We report those values here. See 306-1 for the remainder of our disclosure on this topic.</p>	

2021 Mining Wastes– Mosaic Fertilizantes (tonnes)	
Limestone	1,943,233
Magnetite	3,354,745
Sulfur Sludge (m3)	19,663
Titanium	0
<p>Note: Due to the composition of mineral deposits in Brazil, our Brazil operations handle various mining wastes we have not historically reported for North America operations in MM3 of our annual sustainability disclosure.</p>	