

## WATER

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Water is a valuable resource that we share and is critical to the sustainability of communities, the environment and our business. In many of the areas where we operate, water is scarce, and we manage risks associated with water security and access for our operations and communities. We are taking near and long-term action to minimise and, where possible, avoid any negative impacts on water availability and quality for the future of our business, local communities, and the environment.

Water data has been presented in accordance with the Minerals Council of Australia (MCA) Water Accounting Framework (WAF) meets the ICMM disclosure requirements for water quality. This year we incorporated updates to our water accounting methodology in line with both MCA WAF version 2.0 and the ICMM Water Reporting Good Practice Guide (2nd Edition August 2021), including the disclosure of Other managed water. This has enabled reporting of new water metrics such as total water consumption and discharge.

The metrics we use to measure our performance are shown in the tables below.

### Water accounting overview

Megalitres per annum	Source/destination	Water quality (megalitres)					FY23 Total	FY22 Total	FY21 Total	FY20 Total	FY19 Total
		Type 1	Type 2	Type 3	High	Low					
Operational water	Surface water	18 713	11 619	6 603	30 332	6 603	36 935	35 787	50 128	47 980	46 370
	Groundwater	17 339	3 887	6 552	21 225	6 552	27 778	23 007	28 249	34 524	38 763
	Operational water inputs / withdrawal										
	Seawater	-	-	-	-	-	-	15	143	195	456
	Third party water	1 580	12	676	1 592	676	2 268	2 373	5 113	7 216	3 704
	<b>Total</b>	<b>37 632</b>	<b>15 518</b>	<b>13 831</b>	<b>53 150</b>	<b>13 831</b>	<b>66 981</b>	<b>61 183</b>	<b>83 632</b>	<b>89 916</b>	<b>89 293</b>
	Surface water	845	7 565	147	8 410	147	8 557	9 103	14 936	11 463	12 828
	Groundwater	31	301	655	332	655	987	984	993	1 113	14 352
	Operational water outputs / discharge										
	Seawater	-	83	430	83	430	513	3 290	2 871	2 350	2 769
Third party water	21	-	297	21	297	318	398	2 911	3 290	3 260	
Other	33 266	34 252	8 742	67 518	8 742	76,260 <sup>(5)</sup>	44,259 <sup>(6)</sup>	55 522	54 644	45 724	
<b>Total</b>	<b>34 163</b>	<b>42 201</b>	<b>10 272</b>	<b>76 365</b>	<b>10 272</b>	<b>86 637</b>	<b>58 034</b>	<b>77 233</b>	<b>72 861</b>	<b>78 932</b>	
Operational water consumption						76,260 <sup>(5)</sup>	44,259 <sup>(6)</sup>	55 522	54 644	45 724	
Other managed water	Other managed water inputs / withdrawal						45 238	-	-	-	
Other managed water	Other managed water outputs / discharge						43 599	-	-	-	
Other managed water	Other managed water consumption <sup>(2)</sup>						581	-	-	-	
Combined water <sup>(1)</sup>	Total water consumption						80 275	-	-	-	
Combined water <sup>(1)</sup>	Total discharge <sup>(3)</sup>						133 669	-	-	-	
Additional water metrics	Efficiency (percentage) <sup>(4)</sup>						61.5	65.9 <sup>(7)</sup>	56.3 <sup>(7)</sup>	59.1 <sup>(7)</sup>	61.8 <sup>(7)</sup>
Additional water metrics	Recycling and reuse						106 910	118,496 <sup>(7)</sup>	107,939 <sup>(7)</sup>	129,920 <sup>(7)</sup>	144,179 <sup>(7)</sup>

The sum of the categories may vary to the total figure due to rounding.

- (1) Combined water consists of both operational water and other managed water.
- (2) Other managed water consumption is the total volume of other managed water removed by evaporation or other losses, and not released back to surface water, groundwater, seawater or a third party.
- (3) Total discharge is the total of other managed water outputs/discharge plus operational water outputs / discharge.
- (4) Water use efficiency is calculated as the total recycling and reuse divided by the sum of total recycling and reuse and total operational inputs / withdrawal.
- (5) Operational water consumption has increased by 72 per cent in FY23, as result of improved water accounting to align with MCA WAF 2.0 and ICMM Water Accounting / reporting updates.
- (6) Due to changes in reporting methodology and data collection boundaries, FY22 'other' water outputs / discharge and operational water consumption values may be subject to change. The impact of these changes will be assessed in FY24, and any material restatements will be disclosed in our 2024 Sustainability Databook.
- (7) Recycling and reuse, and efficiency for FY19-22 has materially changed through a water accounting change with the addition of Mozal casthouse water recycled and reused. This change has resulted in restatements, with a 9 per cent increase in total water recycled / reused in FY22, a 16 per cent increase in FY21, 12 per cent increase in FY20, and an 11 per cent increase in FY20.

### Operations with water-related material risk

Megalitres per annum	Source / destination	Worsley Alumina Refinery		Mozal Aluminium		Hillside Aluminium		Illawarra Metallurgical Coal		Hotazel Manganese Mines		FY23 Total	FY22 Total	FY21 Total
		Alumina	Aluminium	Aluminium	Aluminium	Coal	Mines							
Operational water	Surface water	8 533	463	2	1 934	117	11 048	117	11 048	11 995	11 916			
	Groundwater	1 326	-	-	1 132	907	3 366	6 473	6 586					
	Operational water inputs / withdrawal													
	Seawater	-	-	-	-	0	-	15	143					
	Third party water	681	8	520	640	229	2 078	2 210	4 342					
	<b>Total</b>	<b>10 541</b>	<b>471</b>	<b>522</b>	<b>3 706</b>	<b>1 253</b>	<b>16 492</b>	<b>20 693</b>	<b>22 987</b>					
	Surface water	90	145	-	3 350	-	3 586	4 693	3 242					
	Groundwater	-	-	-	-	24	24	24	24					
	Operational water outputs / discharge													
	Seawater	-	-	-	266	-	266	2 977	2 576					
Third party water	1	48	198	50	19	316	390	466						
Other	13 020	323	326	816	417	14 902	16 514	16 195						
<b>Total</b>	<b>13 112</b>	<b>516</b>	<b>524</b>	<b>4 483</b>	<b>459</b>	<b>19 094</b>	<b>24 598</b>	<b>22 503</b>						
Operational water consumption														
Other managed water	Other managed water inputs / withdrawal	13	291	1 676	3 776	190	5 946	-	-					
Other managed water	Other managed water outputs / discharge	13	292	1 034	3 814	190	5 344	-	-					
Other managed water	Other managed water consumption <sup>(2)</sup>	-	-	43	1	190	235	-	-					
Combined water <sup>(1)</sup>	Total water consumption	13 020	323	369	818	607	15 137	-	-					
Combined water <sup>(1)</sup>	Total discharge <sup>(3)</sup>	13 126	808	1 559	8 297	650	24 439	-	-					
Additional water metrics	Efficiency (percentage) <sup>(4)</sup>	29.3	96.9	96.0	35.7	5.1	67.2	62.5 <sup>(5)</sup>	59.5 <sup>(5)</sup>					
Additional water metrics	Recycling and reuse	4 359	14 662	12 594	2 056	68	33 739	34,435 <sup>(5)</sup>	33,738 <sup>(5)</sup>					

The sum of the categories may vary to the total figure due to rounding.

- (1) Combined water consists of both operational water and other managed water.
- (2) Other managed water consumption is the total volume of other managed water removed by evaporation or other losses, and not released back to surface water, groundwater, seawater or a third party.
- (3) Total discharge is the total of other managed water outputs/discharge plus operational water outputs / discharge.
- (4) Water efficiency is calculated as the total recycling and reuse divided by the sum of total recycling and reuse and total operational inputs / withdrawal.
- (5) Recycling and reuse, and efficiency for FY21-22 has materially changed through a water accounting change with the addition of Mozal casthouse water recycled and reused.

### Operations in areas of baseline water stress<sup>(1)</sup>

Megalitres per annum	Source / destination	Water quality (megalitres)					FY23 Total <sup>(2)</sup>	FY22 Total	FY21 Total	FY20 Total
		Type 1 <sup>(8)</sup>	Type 2	Type 3	High	Low				
Operational water	Surface water	2 967	2 117	5 983	5 084	5 983	11 067	12 011	11 960	37 071
	Groundwater	110	282	3 125	392	3 125	3 517	6 539	6 683	31 098
	Operational water inputs / withdrawal									
	Seawater	-	-	-	-	-	-	15	143	0
	Third party water	881	2	676	883	676	1 559	1 617	3 635	4 674
	<b>Total</b>	<b>3 958</b>	<b>2 401</b>	<b>9 784</b>	<b>6 359</b>	<b>9 784</b>	<b>16 143</b>	<b>20 184</b>	<b>22 421</b>	<b>72 843</b>
	Surface water	845	2 602	145	3 447	145	3 592	4 693	3 244	6 534
	Groundwater	31	-	24	31	24	55	50	39	536
	Operational water outputs / discharge									
	Seawater	-	83	183	83	183	266	2 977	2 576	2 250
Third party water	21	-	97	21	97	118	125	134	2 340	
Other	10 327	17	4 462	10 344	4 462	14 806	16 306	15 960	46 551	
<b>Total</b>	<b>11 225</b>	<b>2 702</b>	<b>4 912</b>	<b>13 926</b>	<b>4 912</b>	<b>18 838</b>	<b>24 151</b>	<b>21 953</b>	<b>58 211</b>	
Operational water consumption										
Other managed water	Other managed water inputs / withdrawal						4 271	-	-	
Other managed water	Other managed water outputs / discharge						4 310	-	-	
Other managed water	Other managed water consumption <sup>(4)</sup>						192	-	-	
Combined water <sup>(3)</sup>	Total water consumption						14,998 <sup>(6)</sup>	-	-	
Combined water <sup>(3)</sup>	Total discharge <sup>(5)</sup>						23 147	-	-	
Additional water metrics	Efficiency (percentage) <sup>(6)</sup>						56.8	51.8 <sup>(7)</sup>	49.0 <sup>(7)</sup>	38.0 <sup>(7)</sup>
Additional water metrics	Recycling and reuse						21 252	21,730 <sup>(7)</sup>	21,569 <sup>(7)</sup>	44,673 <sup>(7)</sup>

The sum of the categories may vary to the total figure due to rounding.

- (1) Areas of baseline water stress as per World Resources Institute (WRI) Aqueeduct Tool available at <https://www.wri.org/initiatives/aqueduct> (accessed July 2022) and reviewed as per Technical Note available at: <https://www.wri.org/research/aqueduct-30-updated-decision-relevant-global-water-risk-indicators>.
- (2) FY23 data includes the following operations: Worsley Alumina Refinery, Illawarra Metallurgical Coal, Mozal Aluminium, Hotazel Manganese Mines; as well as the Hermosa project, all of which contribute to South32 total water inputs and outputs. These figures exclude Cerro Matoso, Hillside Aluminium, Metalloys, Cannington, Groote Eylandt Mining Company, Worsley Alumina Mine and Materials operations, Bayside, Eagle Downs and Mine Closure NPI projects, and corporate offices.
- (3) Combined water consists of both operational water and other managed water.
- (4) Other managed water consumption is the total volume of other managed water removed by evaporation or other losses, and not released back to surface water, groundwater, seawater or a third party.
- (5) Total discharge is the total of other managed water outputs/discharge plus operational water outputs / discharge.
- (6) Water efficiency is calculated as the total recycling and reuse divided by the sum of total recycling and reuse and total operational inputs/withdrawal.
- (7) Recycling and reuse, and efficiency for FY20-22 has materially changed through the addition of Mozal casthouse water recycled and reused - a water accounting change.
- (8) Data reported for SASB Metals and Mining Sustainability Accounting Standard, 2018 metric EM-MM-140a.1 as follows: Total fresh water withdrawn and consumed is presented as Inputs (Withdrawals) Type 1 water (as per MCA WAF, 2022) and FY23 total consumption, respectively. To convert unit of measure from megalitres to m<sup>3</sup> multiply data by 1,000. Water quality 'Type 1,2,3' are equivalent to MCA WAF quality listed as 'Category 1,2,3'. Of the total freshwater withdrawn from South32's 'operated operations', 10.5 per cent comes from regions with high or extremely high baseline water stress. Of the total water consumed by South32 operations, 19.4 per cent was consumed by operations in regions of high or extremely high baseline water stress.

### Incidents of non-compliance associated with water quality permits, standards, and regulations

Number	FY23	FY22	FY21
Incidents of non-compliance associated with water quality permits, standards and regulations <sup>(1)</sup>	-	-	1

(1) In FY23 we reported no incidents of non-compliance associated with water quality permits, standards and regulations which resulted in formal enforcement action(s).