

Water

This material topic is subject to assurance by KPMG.

Water is a valuable resource that we all share and a critical input for our operations. In many of the areas where we operate water is scarce, so we need to carefully manage our use. Water is vital for local communities and the environment, and we must take action to minimise and, where possible, avoid any negative impacts on its availability and quality.

Water data has been presented in accordance with the Minerals Council of Australia (MCA) Water Accounting Framework (WAF) and meets the ICMM disclosure requirements for water quality.

Water accounting overview

	Source/destination	Water quality					FY22 Total	FY21 Total	FY20 Total	FY19 Total	FY18 Total
		Type 1	Type 2	Type 3	High	Low					
Inputs/withdrawal (megalitres per annum)	Surface water	18 851	8 860	8 075	27 711	8 075	35 787	50 128	47 980	46 370	56 376
	Groundwater	10 458	4 964	7 585	15 422	7 585	23 007	28 249	34 524	38 763	33 087
	Seawater	0	0	15	0	15	15	143	195	456	863
	Third party water	1 441	7	926	1 448	926	2 373	5 113	7 216	3 704	4 746
	Total	30 750	13 831	16 602	44 581	16 602	61 183	83 632	89 916	89 293	95 072
Outputs/discharge (megalitres per annum)	Surface water	665	3 887	4 551	4 552	4 551	9 103	14 936	11 463	12 828	13 581
	Groundwater	82	254	648	336	648	984	993	1 113	14 352	14 270
	Seawater	1	2 968	321	2 969	321	3 290	2 871	2 350	2 769	4 034
	Third party water	18	0	380	18	380	398	2 911	3 290	3 260	2 382
	Total	32 776	330	11 154	33 106	11 154	44 259	55 522	54 644	45 724	43 046
Consumption (megalitres per annum)											
Efficiency – all South32 sites (percentage)	Total	This is intentionally blank as this is not reported by type					64	53	56	59	55
Recycling and reuse (megalitres per annum)							108 731	93 040	115 936	129 653	117 516

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

Operations with water-related material risk

Megalitres per annum	Source / destination	Worsley	Mozal	Hillside	Illawarra	Hotazel	FY22 Total	FY21 Total
		Alumina Refinery	Aluminium	Aluminium	Metallurgical Coal	Manganese Mines ⁽¹⁾		
Inputs/withdrawal	Surface water	10 634	400	4	692	266	11 995	11 916
	Groundwater	1 460	0	0	3 995	1 018	6 473	6 586
	Seawater	0	15	0	0	0	15	143
	Third party water	659	15	593	720	223	2 210	4 342
	Total	12 753	430	596	5 407	1 507	20 693	22 987
Output/discharge	Surface water	90	70	0	4 533	0	4 693	3 242
	Groundwater	0	0	0	0	24	24	24
	Seawater	0	9	0	2 968	0	2 977	2 576
	Third party water	0	58	265	50	17	390	466
	Total	13 688	355	332	828	1 312	16 514	16 195
Consumption								
Efficiency – all South32 sites with a water-related material risk (percentage)	Total	26	0	96	30	0	49	46
Recycling and reuse (megalitres per annum)		4 462	1	12 762	2 338	4	19 566	18 851

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

(1) This is a cumulative figure of South32 mines in the region.

Operations in areas of baseline water stress

Megalitres per annum	Source / destination	Water quality					FY22 Total ⁽¹⁾	FY21 Total	FY20 Total
		Type 1 ⁽²⁾	Type 2	Type 3	High	Low			
Input/withdrawal	Surface water	3 516	725	7 770	4 241	7 770	12 011	11 960	37 071
	Groundwater	65	3 274	3 199	3 339	3 199	6 539	6 683	31 098
	Seawater	0	0	15	0	15	15	143	0
	Third party water	684	7	926	691	926	1 617	3 635	4 674
	Total	4 267	4 007	11 910	8 274	11 910	20 184	22 421	72 843
Output/discharge	Surface water	665	0	4 028	665	4 028	4 693	3 244	6 534
	Groundwater	25	0	24	25	24	50	39	536
	Seawater	1	2 968	8	2 969	8	2 977	2 576	2 250
	Third party water	18	0	108	18	108	125	134	2 340
	Total	10 932	0	5 374	10 932	5 374	16 306	15 960	46 551
Consumption									
Efficiency – all South32 sites (percentage)	Total	This is intentionally blank as this is not reported by type					25	23	38
Recycling and reuse (megalitres per annum)						6 861	6 670	44 673	

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) Aqueduct 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>. FY22 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.

(2) 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, 2014) and FY22 total consumption, respectively. To convert unit of measure from megalitres to m³ multiply data by 1,000. Water quality 'Type 1,2,3' are equivalent to MCA WAF, 2014 quality listed as 'Category 1,2,3'. Of the total freshwater withdrawn from South32 operations, 13.9 per cent comes from regions with high or extremely high baseline water stress. Of the total water consumed by South32 operations, 36.8 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	FY22	FY21
Incidents of non-compliance associated with water quality permits, standards and regulations	0	1