

SIBANYE-STILLWATER SUSTAINABILITY GROUP MINIMUM STANDARD - WATER MANAGEMENT



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Role	Name and Surname	Designation	Signature	Date Signed
Author	Trisha Mitha	Unit Manager Sustainable Data External Reporting		
Author/ Approver	Siegfried Spanig	SVP Environment and Climate Change		
Approver	Melanie Naidoo-Vermaak	CSO	<i>Melanie Naidoo-Vermaak</i>	18/6/2025

This Global Standard sets the minimum Sibanye-Stillwater requirements to proactively plan and manage water from exploration to post-closure and all forms of processing/manufacturing such that human health, stakeholder water needs, and the environment are protected. The standard supports five water related aspects which are:





- Security of water supply
- Mitigate environmental and social impacts associated with water use
- Manage water as an asset
- Collaborate and engage externally on water policy
- Collaborate on water stewardship

Use of this Standard shall be in conjunction with other applicable Standards and guidance within the Operational and Engineering Functions.

1. Scope

The scope of this Standard is applicable to all Sibanye-Stillwater regions. It applies to all employees of Sibanye-Stillwater as well as any entity that is controlled or managed by Sibanye-Stillwater. In addition, where explicitly stated in an applicable contract, it may apply to Sibanye-Stillwater's vendors, contractors, and other types of business partners. It is applicable to all sites and in all phases of the mine life cycle including exploration, design, construction, operation and closure as well as in our minerals and metals and other processing and recycling facilities and sites.

2. Planning and design

- 2.1 A mine/ operational site water management plan or equivalent documents shall be developed (if not in place already) utilizing an integrated, catchment approach that addresses: (The criteria specified below might not be applicable to all operations and those relevant should be selected)
- 2.1.1 Description of catchment(s) including hydrological/geohydrological setting
 - 2.1.2 Catchment availability, reliability, security and utilization
 - 2.1.3 Strategic objectives for water management
 - 2.1.4 Risk-based environmental design criteria for water management with consideration of extreme climate events (flooding/drought)
 - 2.1.5 Water use and management requirements (inclusive of a description of all water sources) for current and future operations including a view on closure where relevant
 - 2.1.6 Water management risks (including consideration for surplus or deficit management or changes in water quality)
 - 2.1.7 Description of water treatment systems and water disposal
 - 2.1.8 Emergency response actions if not addressed separately
 - 2.1.9 Key water stakeholder mapping and engagement (water users, right holders)
 - 2.1.10 Regulatory compliance and catchment governance
 - 2.1.11 Residential areas, cultural impacts, future proposed land uses, visual aesthetics (with consideration for key landscape features)



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- 2.1.12 Community needs assessment and cumulative impacts including addressing community issues and concerns,
 - 2.1.13 Monitoring plan and/or management plan and Key Performance Indicators (KPIs)
 - 2.1.14 Roles, responsibilities, and competencies
 - 2.1.15 Annual business plan requirements
-
- 2.2 Site water management plans or equivalent shall be developed in accordance with Sibanye-Stillwater permits, licenses, applicable laws, regulations, external standards and other relevant and appropriate requirements or voluntary commitments
 - 2.3 Water quality standards for discharge to surface waters or groundwater shall comply with the host country's laws and regulations or permit/license conditions. For host countries where legislation is non-existent or not protective of downstream beneficial use, the site shall apply standards based on independent risk assessment(s) or drinking water standards that may apply
 - 2.4 The points of water quality and quantity compliance shall be determined based on site-specific conditions and risk-based analyses in consultation with relevant stakeholders and/or authorities. These analyses shall consider point and non-point source loading and mixing models (where required) to ensure compliance. Points of compliance and monitoring shall include both ground and surface water. Points of compliance and monitoring shall be under Sibanye-Stillwater's control such that interference or third-party contamination does not impair compliance, unless specified otherwise in permits or other requirements
 - 2.5 Baseline surface water, groundwater hydrology and hydrogeochemical characterization shall be conducted for any new project, site expansion or new acquisition to establish and document pre-operational or pre-ownership water quality and quantity conditions. If water is sourced from a third party, this may not be applicable
 - 2.6 Site-wide water balance shall be developed and maintained for all aspects of operations and potential interfacility transfer of water or water rich substances like slurries. Every site shall evaluate the need for refining the water balance model to include a chemical balance for key contaminants, based on site risks and other requirements. Water balances and water quality data should be made available for external review in the event of third parties, including stakeholders and government officials relying on this information
 - 2.7 Sites shall have an established water accounting framework (WAF) that focuses on minimizing the water footprint through optimization, minimizing fresh and purchased water use, recycling and reuse
 - 2.8 Sites shall develop an erosion, storm water and sediment control plan to be implemented prior to land disturbance and the necessary authorizations acquired where relevant



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- 2.9 All water management, impoundment, and conveyance structures shall comply with Sibanye-Stillwater standards and requirements specified by permits, licenses, applicable laws, regulations and obligations as defined in any agreements
- 2.10 All sites shall conduct a risk-based assessment of water impoundment and conveyance structures where applicable to ensure adequate levels of protection for human health and safety, water resources, and biodiversity
- 2.11 Risk-based designs shall be reviewed by Group/Regional Global Practice leads for Geotech and Hydrology where necessary and peer reviewed externally to ensure conformity to best practises
- 2.12 Water storage reservoirs operating plans shall include ecological management strategies considering the expected aquatic flora, fauna and limnological conditions and may be included in future biodiversity plans if not included yet
- 2.13 Opportunities identified as part of the completion of the ICMM Water Stewardship Assessment tool should be incorporated in any future site planning and or be implemented where immediate risks regarding water security are prevalent

3. Implementation and management

- 3.1 Each site shall document roles, responsibilities, and accountabilities for operational water management and shall assign a single point of accountability at the senior site leadership level in a site water charter or equivalent.
- 3.2 A site water management plan or equivalent shall be implemented for each site. Site water performance metrics shall be compliant with legal and other requirements and reviewed every three to five years. The site water management plan shall be updated as required. Reviews will identify opportunities to
 - 3.2.1 Protect water health and biodiversity in catchment
 - 3.2.2 Optimize water use through reuse and efficiency
 - 3.2.3 Mitigate environmental and social water impacts
 - 3.2.4 Enhance other catchment water supply uses
 - 3.2.5 Prevention of contact and non-contact water to minimise treatment
 - 3.2.6 Include outcomes from completed ICMM Water Stewardship Assessment process
- 3.3 The erosion, storm water and sediment control plan or equivalent shall be implemented and reviewed annually and updated as required throughout the operational phase where required.
- 3.4 The site-wide water balance shall be maintained throughout the operational phase and will be reviewed cross-functionally within regions. The models/balances shall be updated/calibrated as required.
- 3.5 Site procedures, systems and controls shall be implemented to ensure water discharge quality and quantity meets the identified environmental, ecological and legal limits. These



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systems shall include specific short-term and long-term triggers and response action plans to prevent impacts

4. Performance monitoring

- 4.1 Monitoring and trend analysis shall be conducted as per the water monitoring plan or equivalent, to report and evaluate system performance, demonstrate compliance, and support continuous improvement.
- 4.2 Water KPI performance shall be reported within each region and shared with Group Environment on a quarterly basis with IAR data being collected annually.
- 4.3 The following definitions shall apply within the Sibanye-Stillwater group of companies:
 - 4.3.1 Total water withdrawn: all water abstracted from ground and surface water sources and includes all purchased water from third parties (i.e. local councils etc.)
 - 4.4 Total water purchased: all water purchased from a third-party resource for mining and processing/recycling purposes and includes potable water, industrial water, grey water and other surface water purchases from irrigation board(s)
 - 4.5 Water discharged: All water released into the environment at licensed discharge points
 - 4.6 Water used: Total water withdrawn minus total water discharged. For US (Stillwater specifically) use equates to water added to concentrator(s) plus potable water purchased
 - 4.7 Fresh water and other water: For reporting purposes water quantities could be split into "fresh water" and "other water" categories and the differentiator is the total dissolved solids content of 1000mg/l
 - 4.8 Unit of measure: SI units are used throughout Sibanye-Stillwater and quantities are expressed in megalitres (ML) with one ML being the equivalent of one million litres
 - 4.9 Legal compliance water quality analyses shall be conducted by an accredited lab either internally or externally with competence to perform the required analysis
 - 4.10 Sites shall monitor appropriate water impoundments, solutions, effluents, and surface waters to ensure compliance with the International Cyanide Management Code. As a minimum, sites shall measure temperature, arsenic, nitrate, calcium, dissolved oxygen and alkalinity as CaCO₃ while completing monitoring activities, unless not applicable

References

- A practical guide to catchment-based water management for the mining and metals industry, ICMM, 2015
- ICMM Water Stewardship Assessment tool 2023



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