



**water & sanitation**

Department:  
Water and Sanitation  
REPUBLIC OF SOUTH AFRICA



## **ACID MINE DRAINAGE WITS BASIN MONITORING PROGRAMME**

Monitoring water level and rainfall for 42 Geosites  
(Consisting of boreholes, shafts, 1 spring & 4 rainfall recorders)  
(Specialized Acid Mine Drainage monitoring network)

**Acid Mine Drainage in South Africa focus on Mine Water Management in the Witwatersrand Gold Mining Area.**

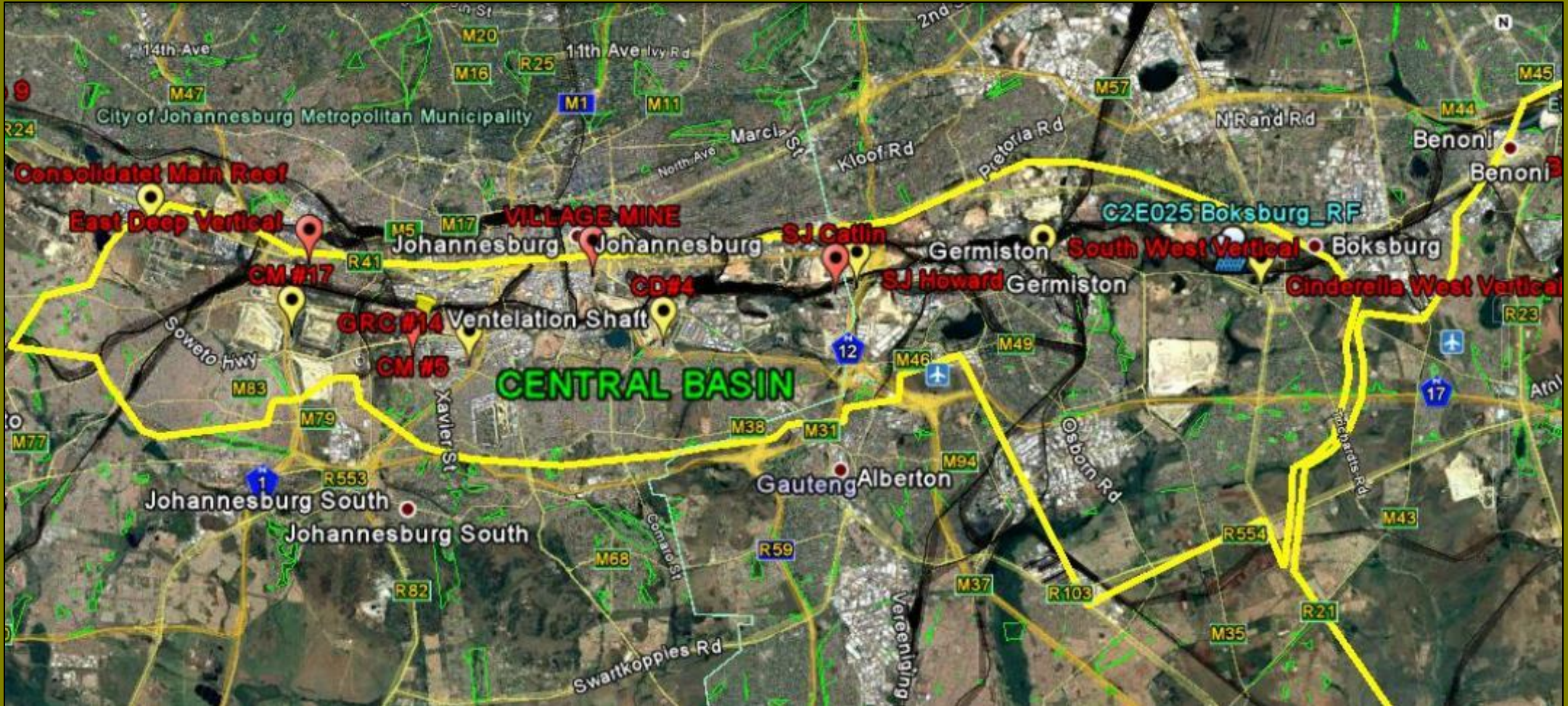
**The problems associated with Acid Mine Drainage (AMD) and the effects it has had on the Witwatersrand gold mining are being studied.**

- With recognition to the National Water Act, we recognize that water is a natural resource that belongs to all people. Protection of the quality of water resources is necessary to ensure sustainability of the nation's water resources in the interest of all water users and the need for integrated management of all aspects of water resources.
- Designing and optimizing our national monitoring network is crucial, through data collection and assessing the data for better management.
- Stakeholder involvement includes sharing of information in overlapping projects, assistance on monitoring and management aspects.
- Water level monitoring are taken place on a monthly interval in the Eastern -, Central – and Western Basins.
- Water Quality Monitoring are taken place quarterly in the Western Basin, surrounding the Cradle Of Humankind.
- Some boreholes are equipped with data loggers, recording parameters like Electrical Conductivity, Temperature and Pressure. The data are downloaded with Laptop and processed for interpretation and storing on DWS various platforms.



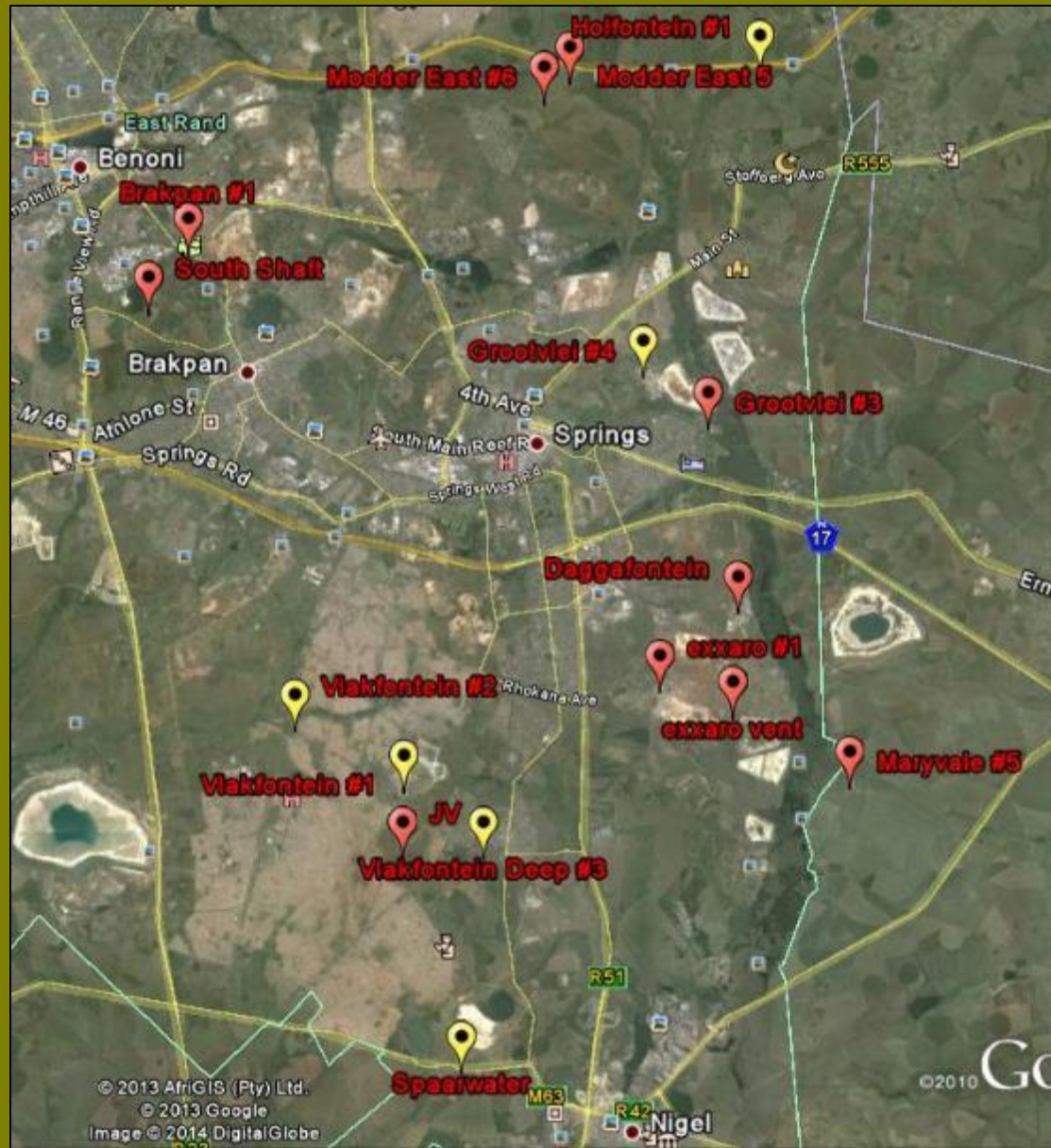
STUDY AREA:

CENTRAL BASIN MONITORING SHAFTS GEOGRAPHIC SETTING





# EASTERN BASIN MONITORING SHAFTS GEOGRAPHIC SETTING



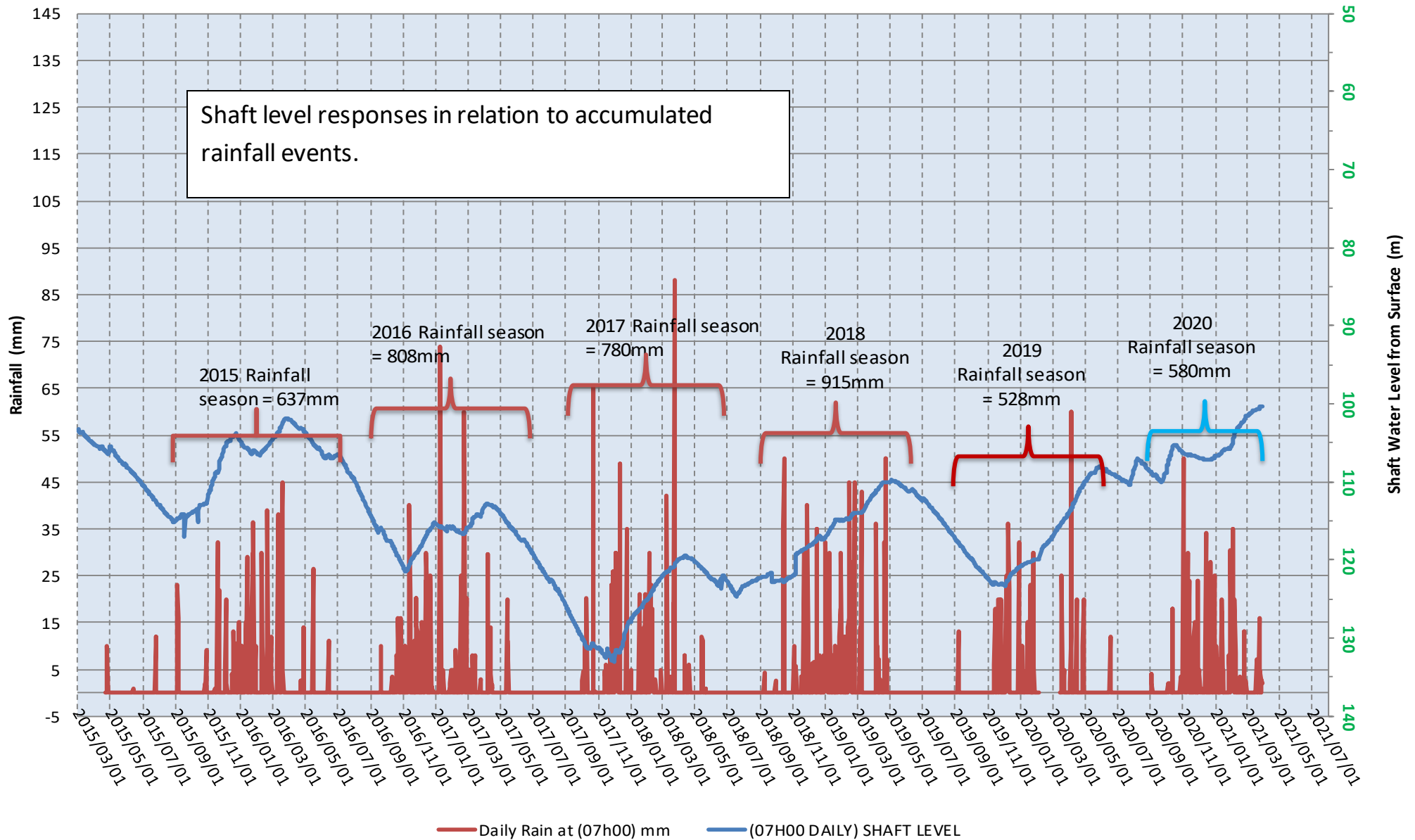
# WESTERN BASIN MONITORING GEOSITES GEOGRAPHIC SETTING





# DATA ACQUISITION:

## AMD CENTRAL BASIN - SWV TREATMENT PLANT Daily Shaft Level & Rainfall Summary



- Future plans include linking Water Resource Protection with emerging water quality issues; innovate approaches to identify pollution sources; water resource protection zoning; implication of raw water quality on drinking water supplies and Karst Hydrogeology.

THANK YOU

END

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