Water & Wastewater



We Understand Water!

Adroit Technologies

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Adroit Solutions

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Adroit Technologies concerns itself mainly with R&D, Production, Sales & Marketing, Training and Support of software products for Automation, SCADA, MIS and MES solutions. In addition, Adroit Technologies has a professional services arm, known as Adroit Technologies Technical Services that consults in and develops customised industrial IT, MIS and MES solutions for customers.

The **Water Sector** is a vast and complex one and the Adroit SCADA is ideally suited to assist in the efficient monitoring and control of even the most complicated production plant.

The rigid and quality driven nature of this industry is ideally suited to the Adroit SCADA/HMI product. The time tested and proven reliability of the product sees Adroit being used by large producers to safely run these valuable and strategic assets.

The Adroit architecture and openness offers companies a unique capability of not only traditional SCADA/HMI functionality but the ability to integrate all aspects of their operations. By adopting a more holistic approach to Operations Management significant savings and operational efficiencies can be realised.

In this sector, Adroit is uniquely placed to ensure a superior quality of supply in all aspects of the operations and management of these facilities.

Adroit SCADA Capabilities and Benefits:-

- Process Visualisation
- Process Events and Alarming Management
- Quality Management
- Historical Data Logging and Trending
- Fully Object orientated
- Process Improvement / Built in Auditing functionality
- Reporting and Analysis
- Integration into Business Applications

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Target Areas	Challenges	Solutions
• Desalinisation • Water Treatment • Irrigation • Control Rooms • Boreholes	• Process Management • Process Efficiency • Predictive Maint. • Remote Monitoring • Reporting	• SCADA • PLC • HMI • LVS • VSD



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Some of our **Customers** in the Water Industry

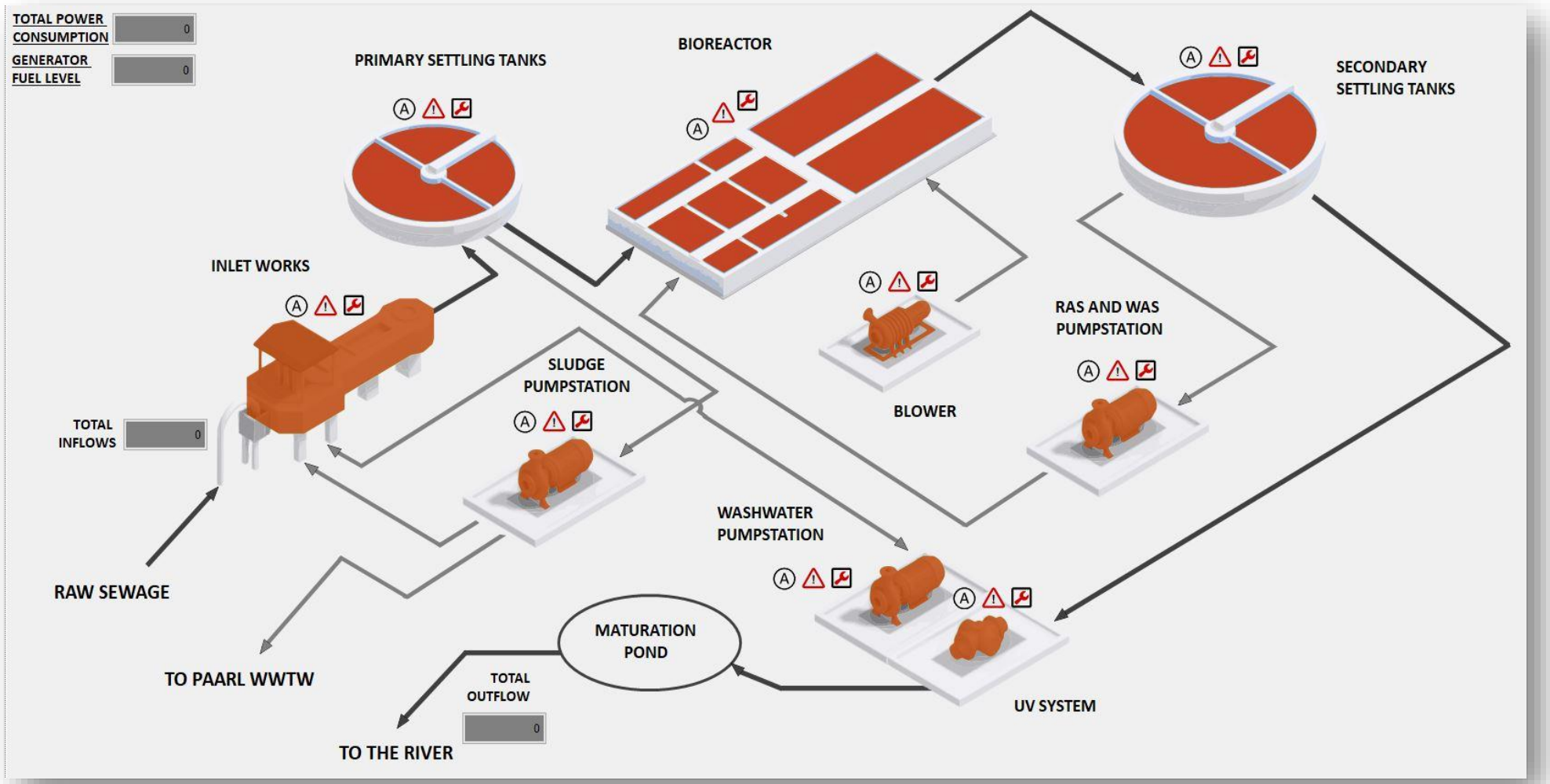
Water & Wastewater

- ✓ Water Utilities Corporation Botswana
- ✓ Amatola Water
- ✓ Johannesburg Water (SOC) Ltd
- ✓ Bloem Water
- ✓ Magalies Water
- ✓ Cape Metropolitan Council
- ✓ Ekurhuleni
- ✓ Kimberley
- ✓ Harrismith
- ✓ Klein Karoo
- ✓ Krugersdorp
- ✓ Newcastle
- ✓ Pietermaritzburg
- ✓ Polokwane
- ✓ Qwa Qwa
- ✓ Stanger
- ✓ ERWAT
- ✓ Umgeni Water
- ✓ Sedibeng Water
- ✓ Sembcorp Silulumanzi

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Drakenstein Municipality, South Africa

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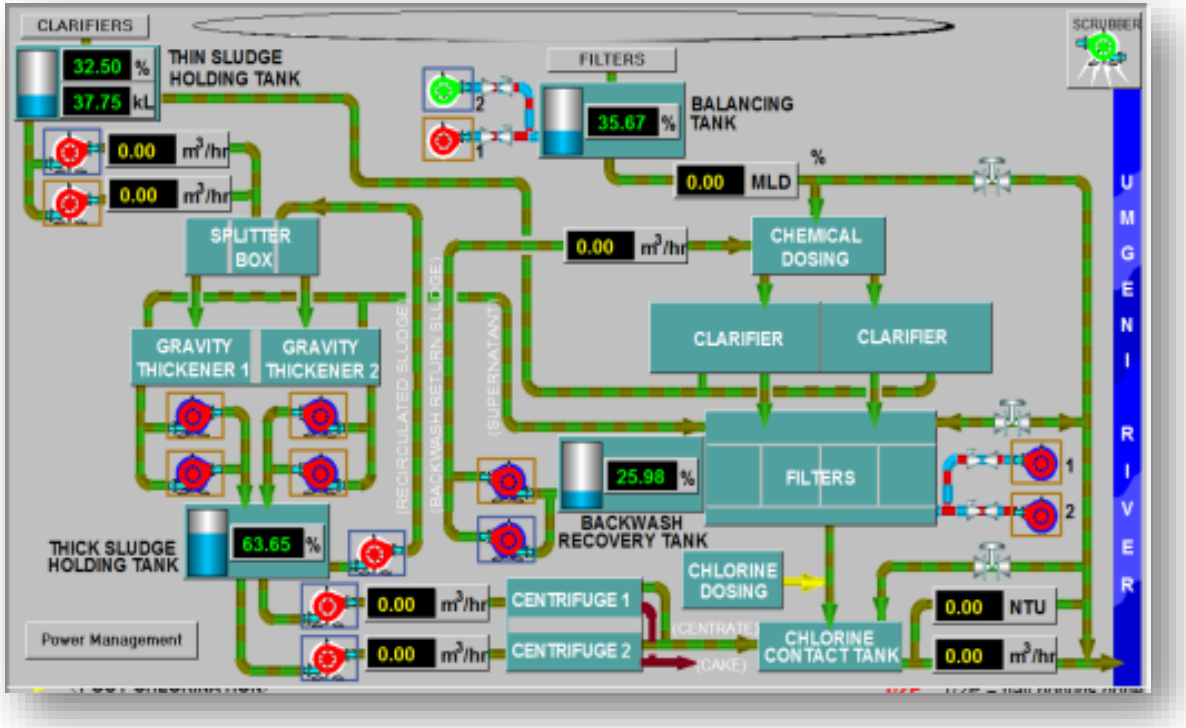
UGU District Municipality, South Africa

Water & Wastewater

UGU District Municipality is one of ten district municipalities in KwaZulu Natal, located at the most southern tip of the province's coastline, covering 112 km of Indian Ocean.

Systems range from :

Unlimited Scanned points, Clustered Agent Servers with 10 View Nodes to 5000 Scanned Points Stand Alone systems



Sites Include:
Umtamvuna,
Marburg,
Park Rynie,
Oslo Beach,
Weza,
and a central control centre in Port Shepstone under development.

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Facts about the Umgeni Water reference site:

- Umgeni Water's infrastructure assets in support of its primary business comprise:
  - Approximately 746 kilometers of pipelines and 66 kilometers of tunnels,
  - 13 dams and 11 water treatment works
  - An additional 18 small water treatment works and 19 borehole schemes
  - A total of 440 million m3/yr (1.2 million m3/d) are currently supplied to customers who serve 6.1 million people or 1.68 million households through reticulation networks.

- The organisation also treats bulk wastewater totaling 28 million m3/yr (76700 m3/d) and in support of this operates 5 wastewater treatment works.

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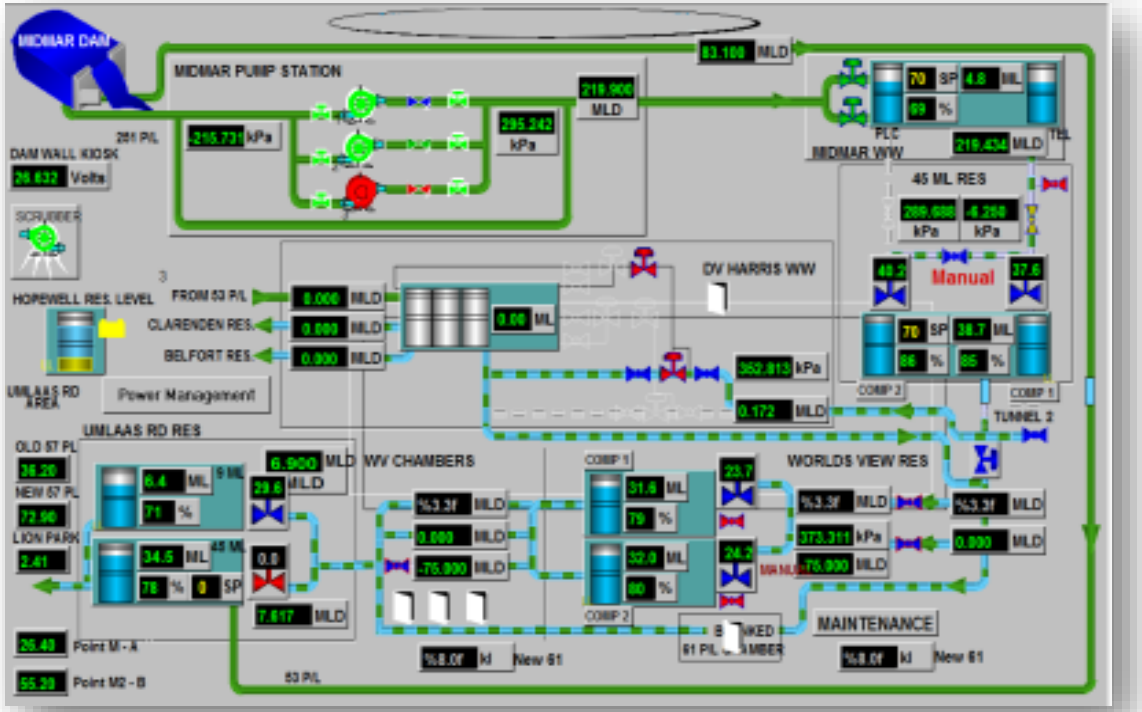
UMGENI Water Coastal and Inland, SA

Largest supplier of bulk potable water in the Province of KwaZulu-Natal, South Africa.

The organisation currently supplies 440 million cubic meters of potable water to its six municipal customers.

Systems Range from Unlimited Scanned points Clustered Agent Servers with 17 View Nodes, to 5000 Scanned Points Stand Alone systems.

Sites Include:
Midmar,
Howick,
DV Harris,
Ixopo,
Darvill,
Durban Heights,
Wiggins,
Hazelmere,
Amanzimtoti,
Maphumulo,
Mhlabatshane and various other smaller sites.



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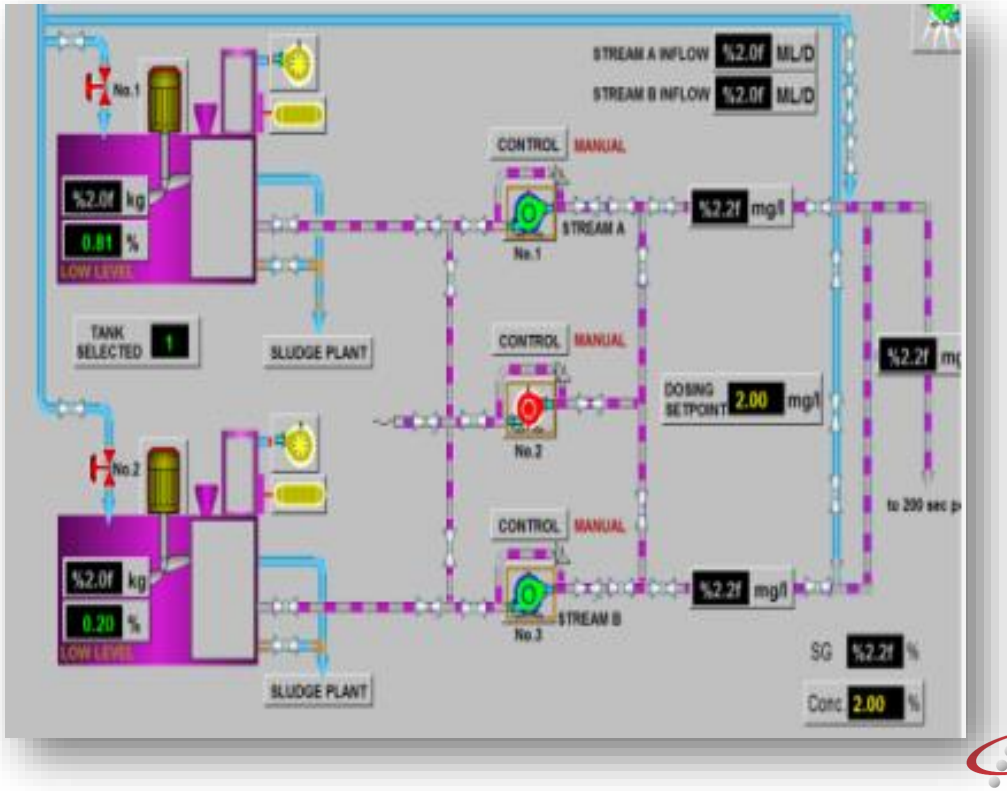
Umhlatuze Water, South Africa

Based in KwaZulu Natal, Mhlathuze Water's area of supply covers some 37,000km² stretching from the Thukela River in the south and up the east coast to the Mozambique and Swaziland borders, around Vryheid and back to the uThukela River.

Within this region, Mhlathuze Water has built and operates an inter-basin transfer, major water treatment plants, an offshore wastewater disposal pipeline and it operates treatment and sewerage plants on an agency basis for local municipalities.

Stand Alone Configuration

- 1500 Scan Points and 9 Remote Client Connections.



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Johannesburg Water, South Africa

Facts about the Johannesburg water reference site:

- **MAPS** is the only SCADA used by Johannesburg Water (JW). See www.joziwater.co.za
- Johannesburg Water uses Schneider PLC's and Spectrum RTU's.
- Johannesburg Water's infrastructure assets in support of its business comprise:
  - 89 Water Reservoirs
  - 28 Water Towers
  - 12 581 km distribution pipes
  - 6 Wastewater Treatment Works
- JW supplies 1.4 million domestic, commercial and industrial customers and serves an estimated consumer base of 4.5 million people with approximately 1.574 m3/d
- JW employs approximately 2 500 people

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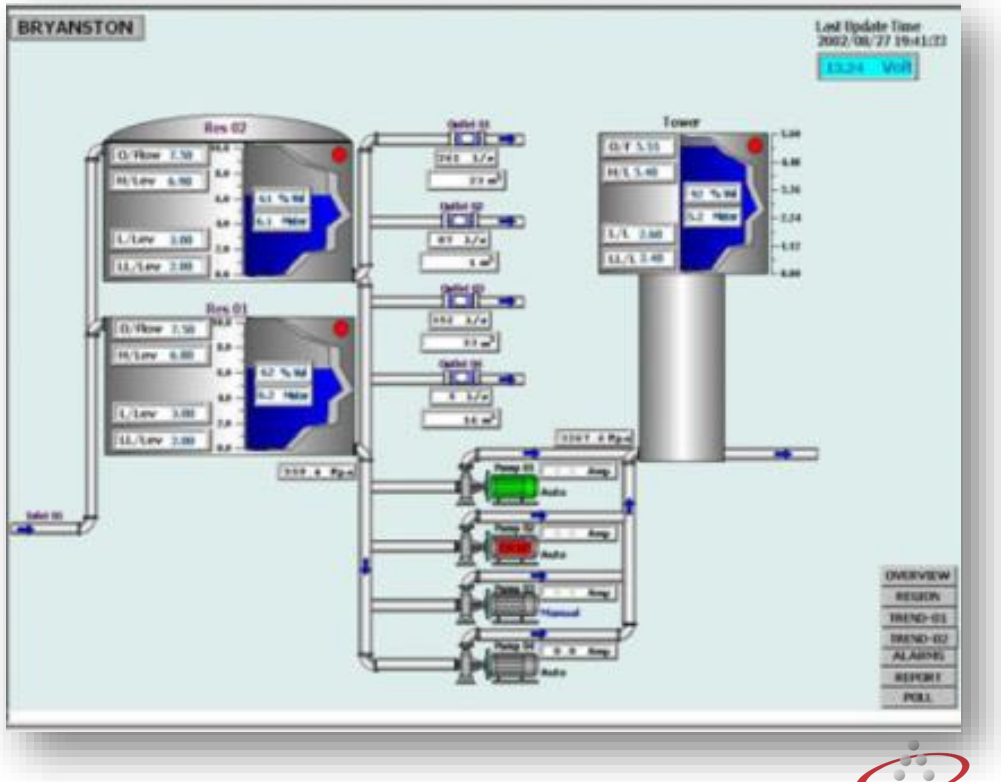
Johannesburg Water, South Africa

Johannesburg Water has been mandated the responsibility of providing water and sanitation to three million residents of the City of Johannesburg.

Adroit SCADA is installed at its six Wastewater Treatment Works and extensive reservoir network of 140 sites to optimise the city councils' assets through cutting edge technology.

Active Cluster Configuration

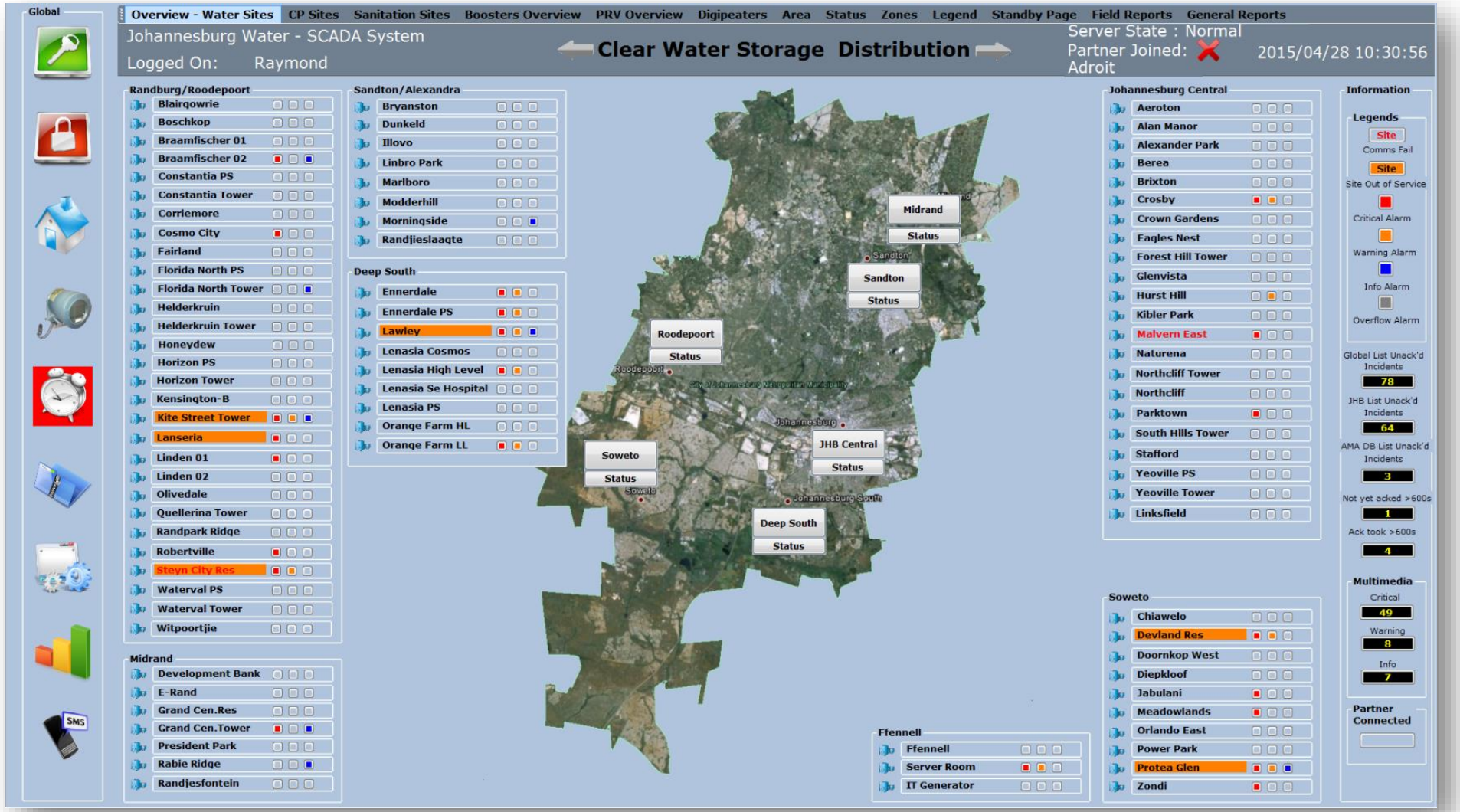
– 50 000 Scan Points and 5 Remote Client Connections



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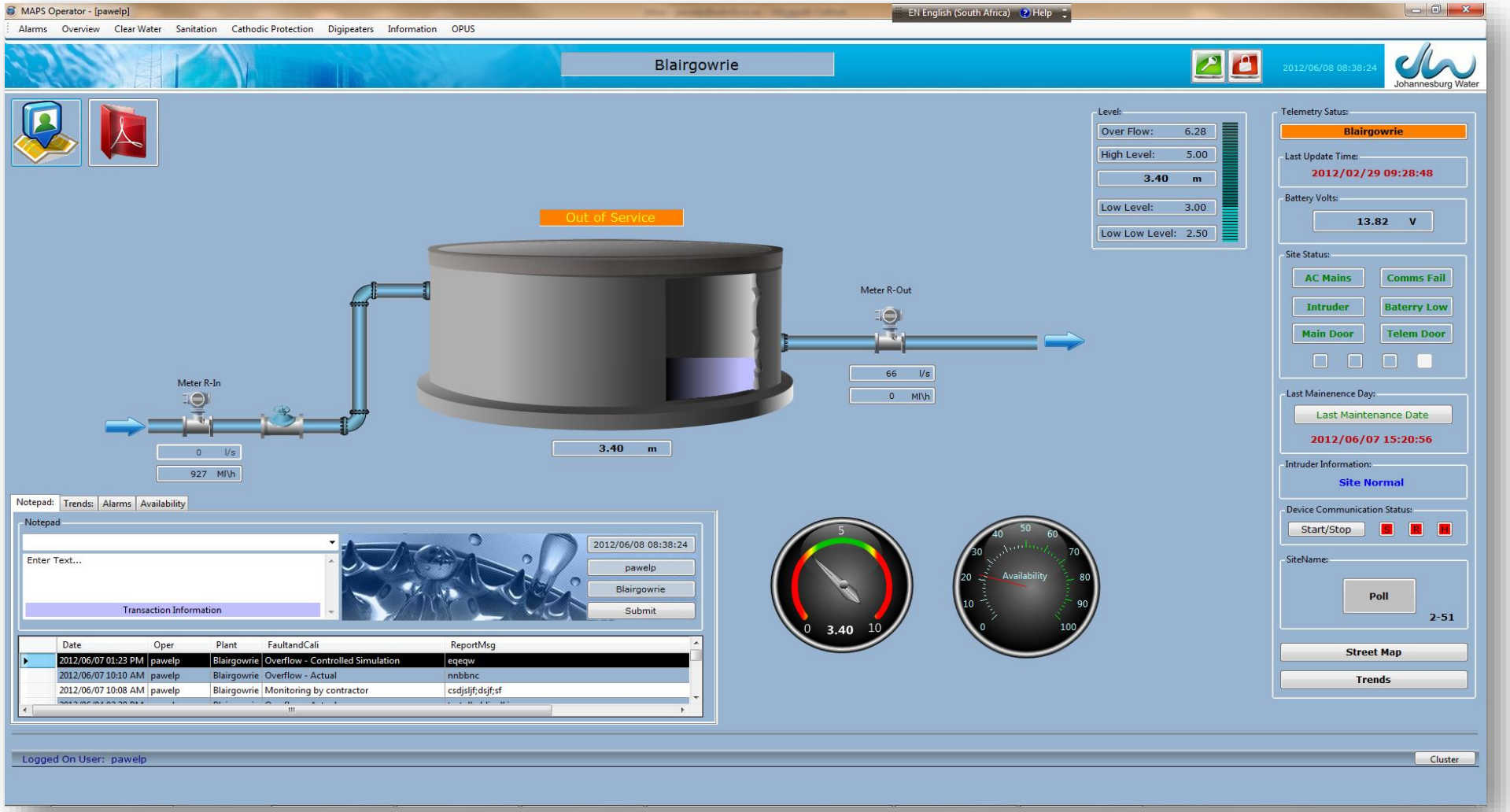
Johannesburg Water, South Africa

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Johannesburg Water, South Africa



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Bloem Water, South Africa

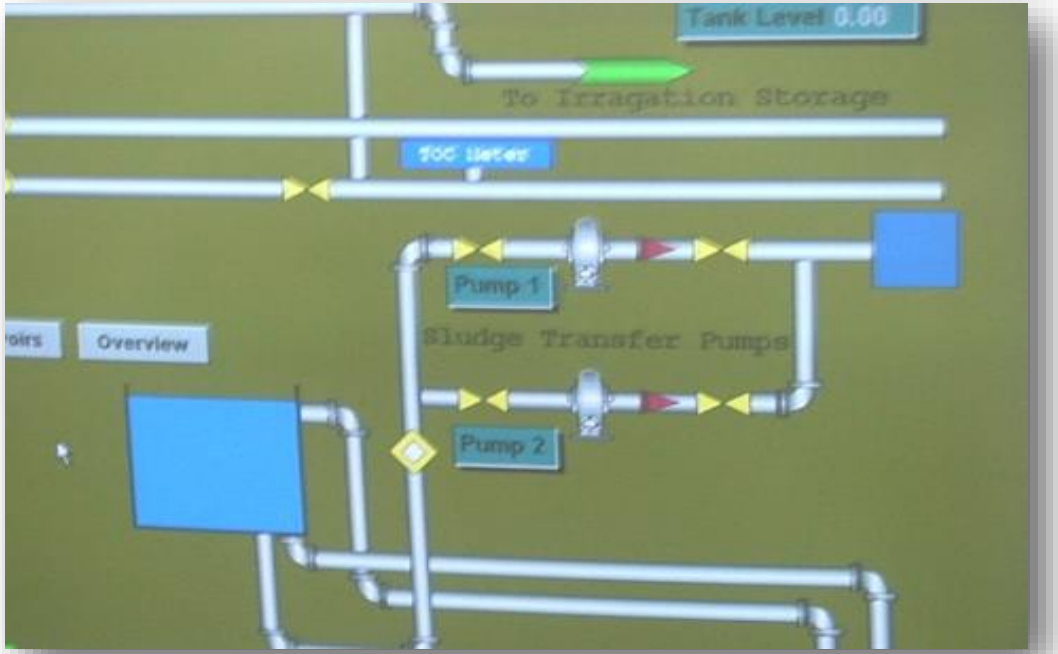
Remote areas are managed from three different locations spread throughout the Central and Southern Free State.

From the central office, Bloem Water maintains and monitors the mentioned sites that supply water to the greater Bloemfontein area and other municipalities in the Southern Free State.

The MAPS SCADA monitors reservoir and dam levels and performs pump control remotely. Items that are monitored includes, amongst others, valve conditions and winding temperatures.

Stand Alone Configuration

– 25 000 Scan Points and 1 Remote Client Connections



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City of Cape Town Water, South Africa

The MAPS SCADA is installed at all nine of the City's water treatment plants and two major pump stations.

These installations range in capacity from 3 to 500 mega liters per day and supply water to the City of Cape Town and neighboring local authorities.

The MAPS SCADA monitors reservoir and dam levels and performs pump control remotely. Items that are monitored includes, amongst others, valve conditions and winding temperatures.

Cluster Configuration

– 2500 Scan Points and 8 Remote Client Connections

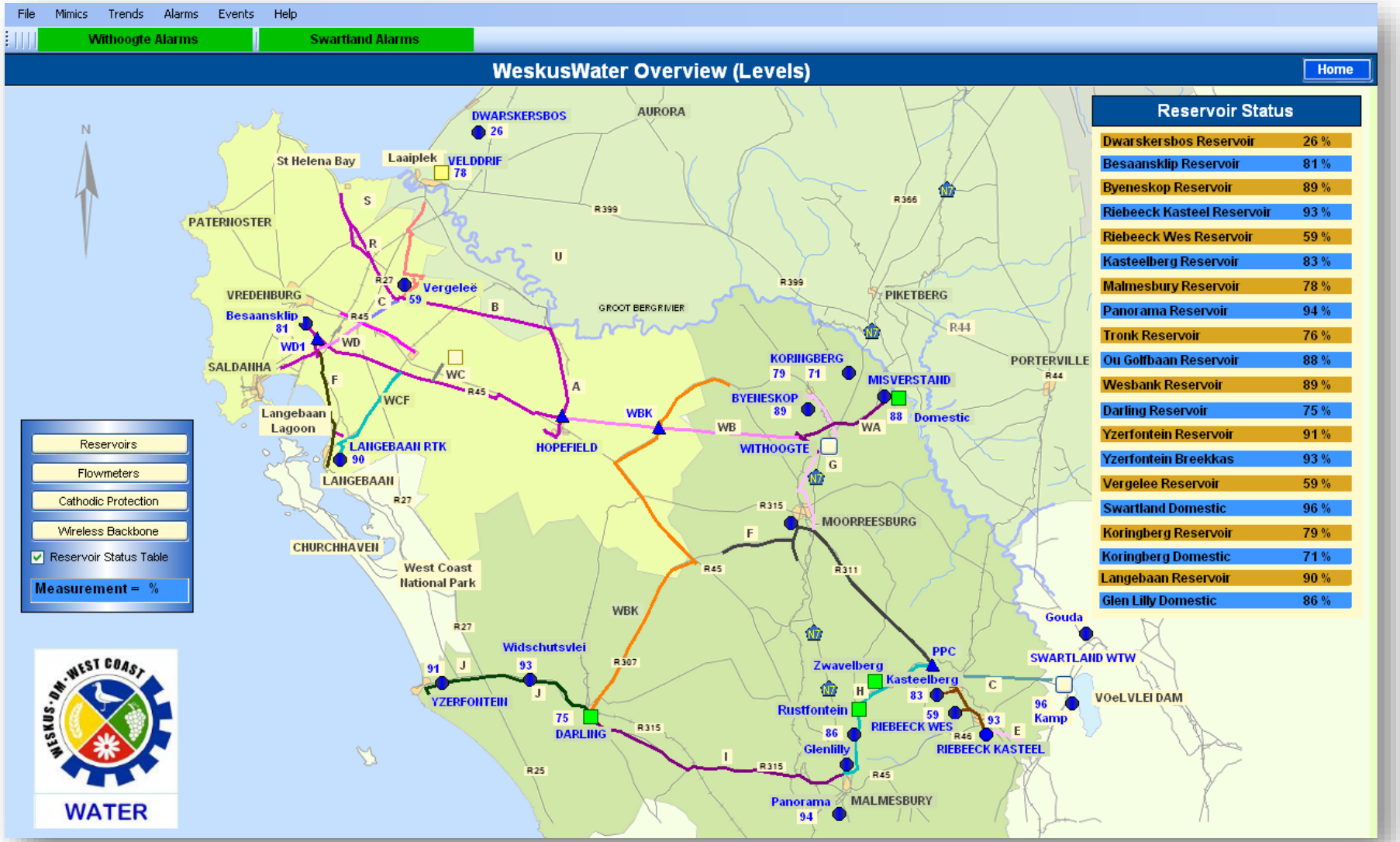


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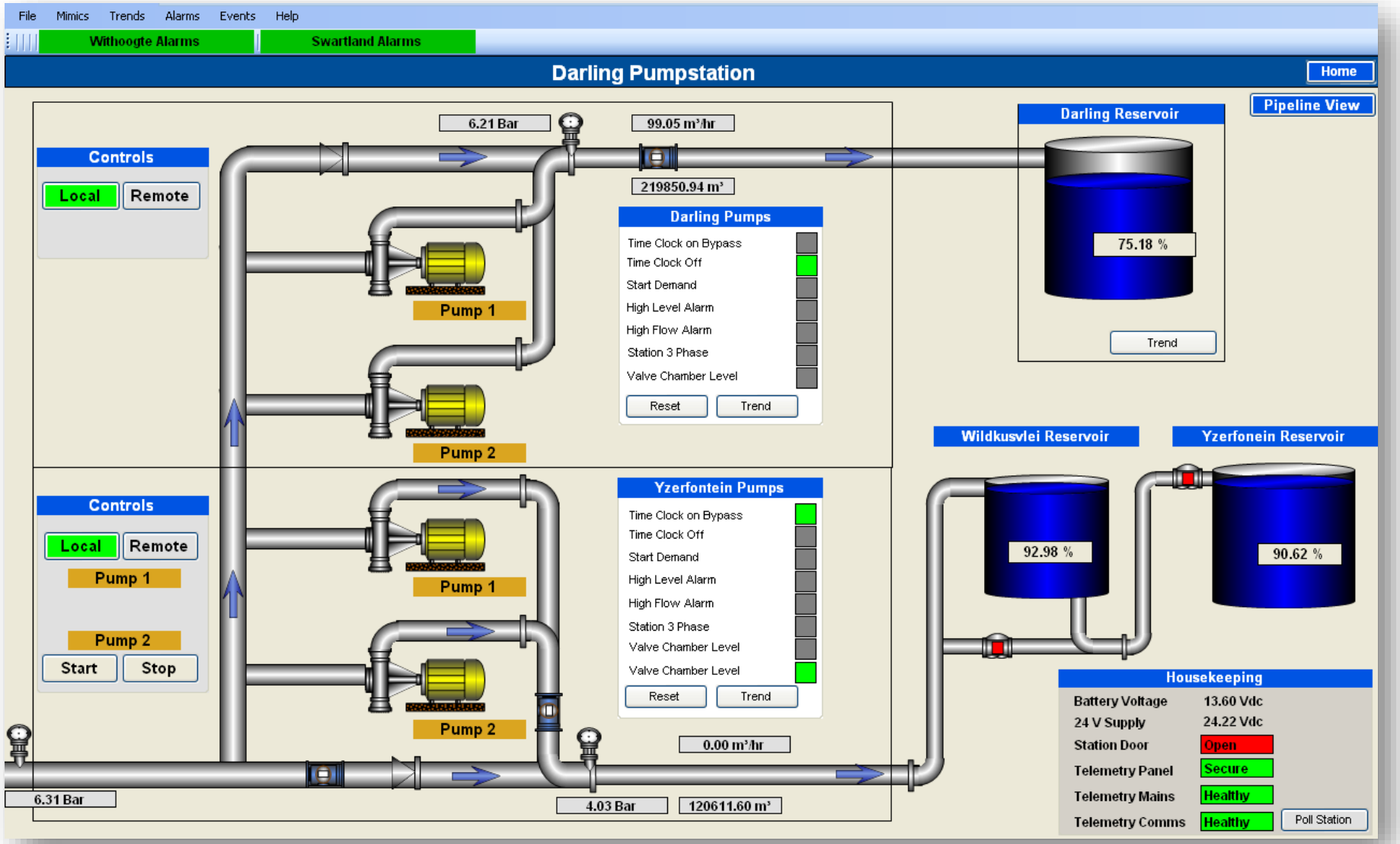
City of Cape Town Water, South Africa

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City of Cape Town Water, South Africa



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Siza Water, KZN South Africa

Situated on the South African coast, 40km North of Durban, Siza Water's service area includes the coastal town of Ballito and the surrounding areas.

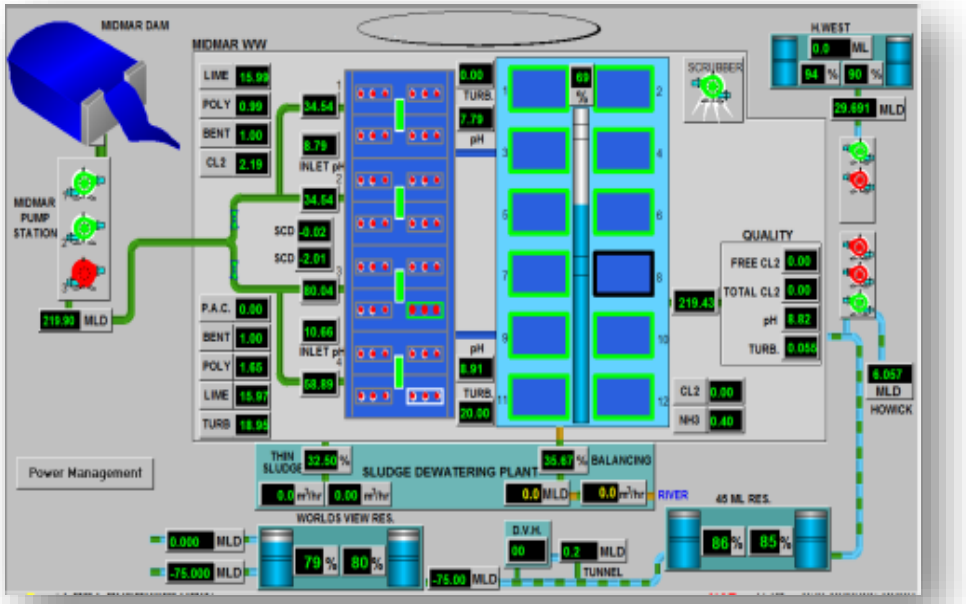
The concession supplies water to a population of approximately 50,000 through either direct household connections or standpipes, about half of the population are served by household connections and all of these are connected to the wastewater system.

Wastewater is treated at one of Siza Water's two wastewater treatment plants with the Fraser's plant taking up to 12 Mld and Shakaskraal treating 2 Mld; a third plant is currently in the planning stage.

These plants are fed via a wastewater network of 110 kilometers which has 20 pump stations.

Stand Alone Configuration

- 300 Scan Points and 1 Remote Client Connection



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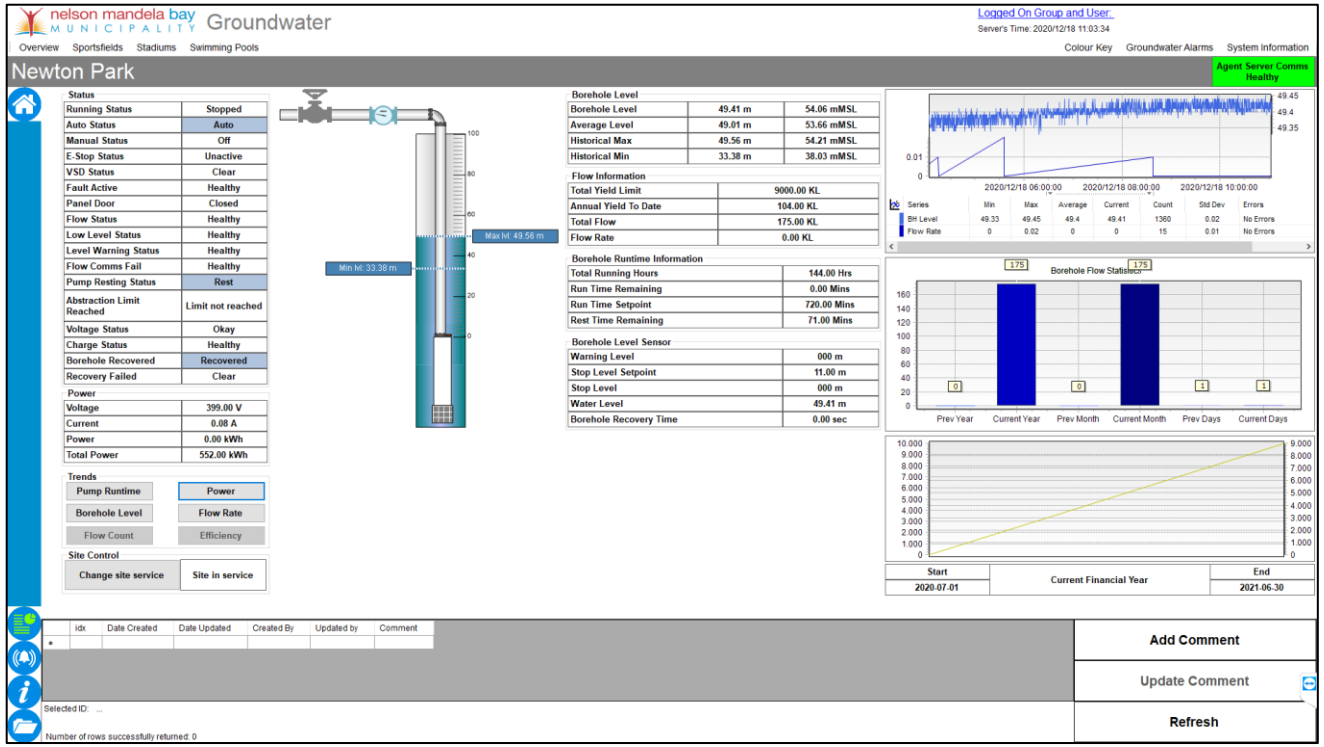
Nelson Mandela Metropolitan Municipality, SA

Nelson Mandela Bay Municipality is one of six Metropolitan (or Category A) municipalities in South Africa.

It is located on the shores of Algoa Bay in the Eastern Cape province, and comprises the city of Port Elizabeth, the nearby towns of Uitenhage and Despatch, and the surrounding rural area.

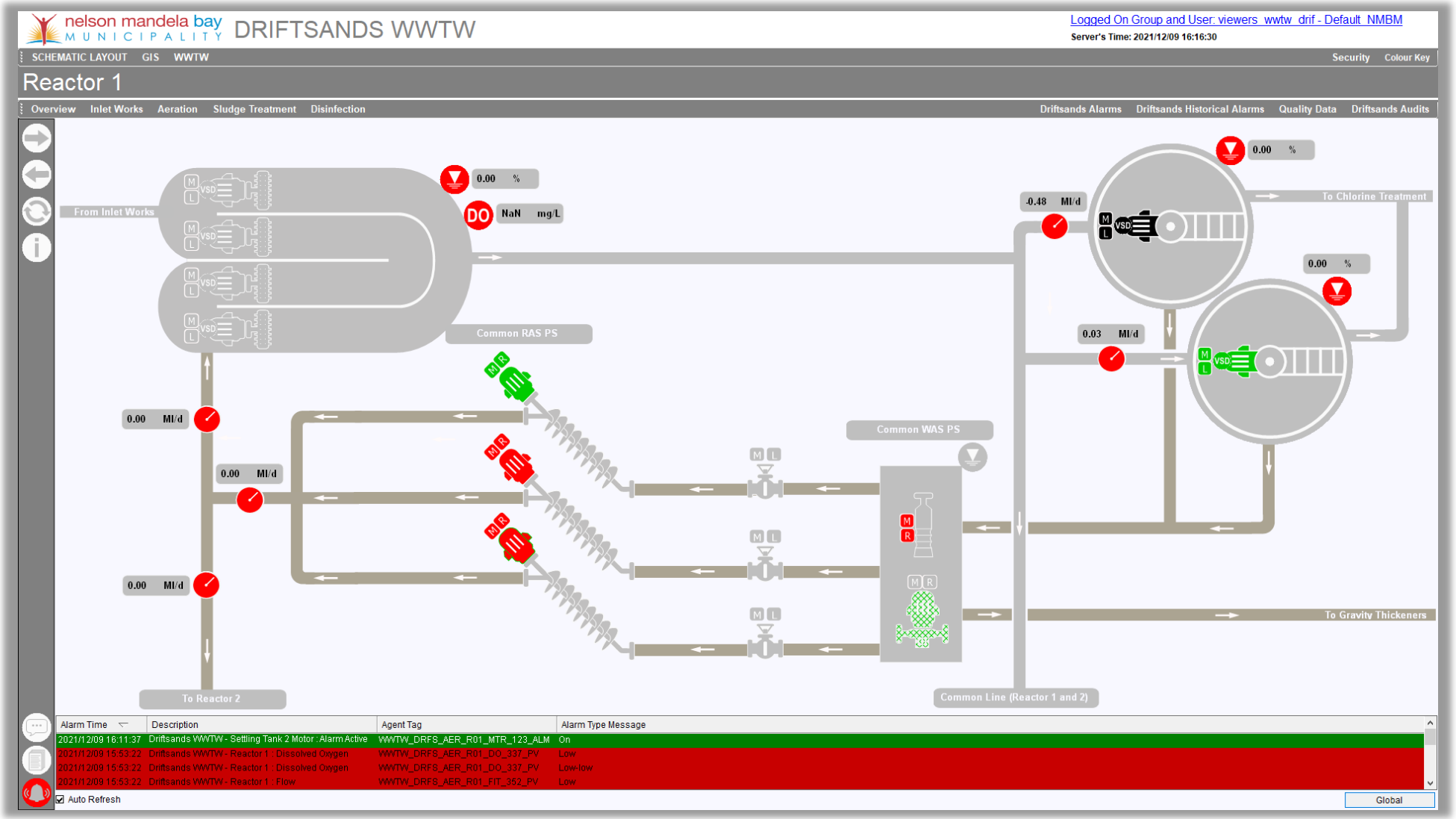
Stand Alone Configuration

- 1500 Scan Points



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Nelson Mandela Metropolitan Municipality, SA

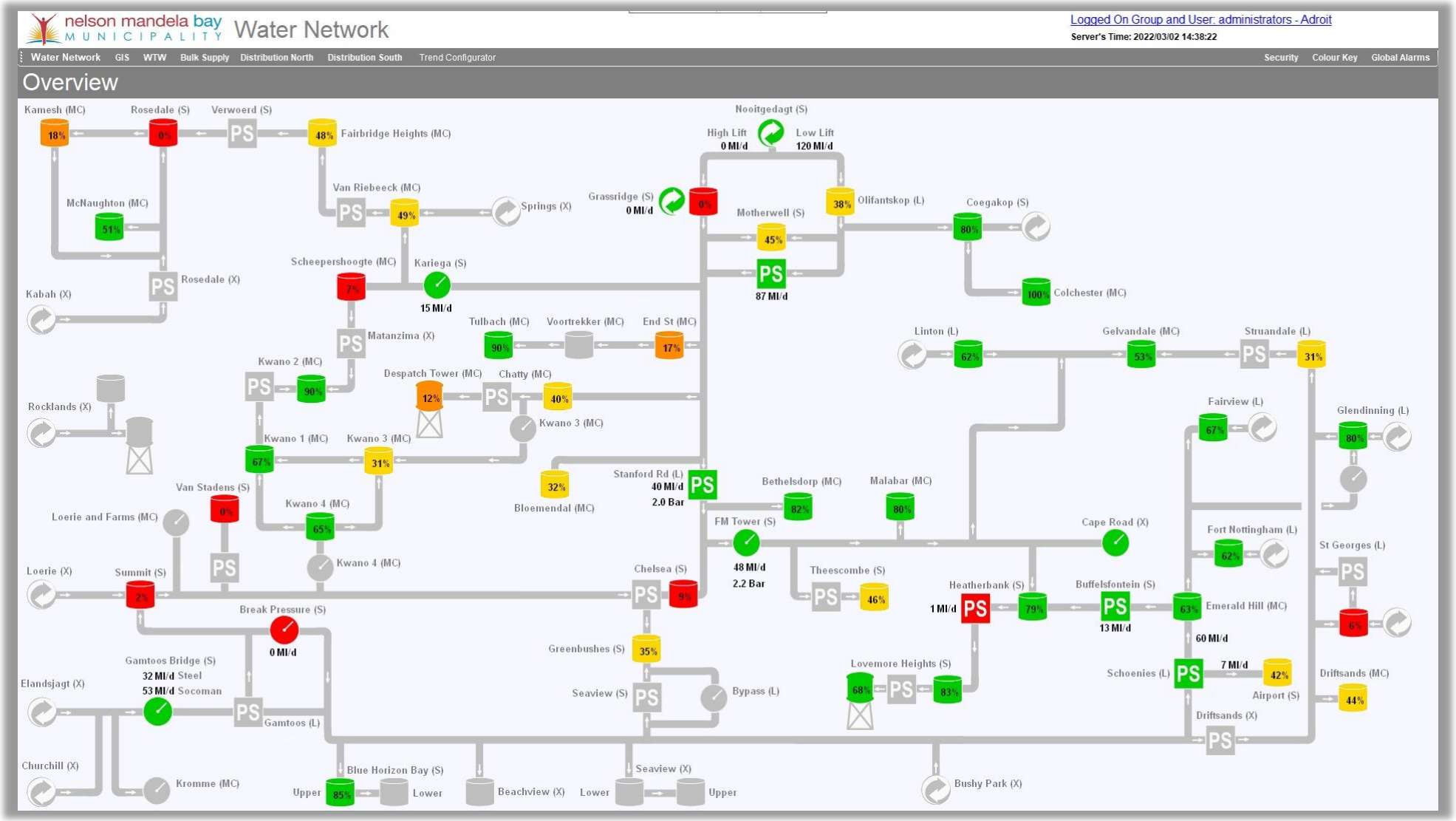


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Nelson Mandela Metropolitan Municipality, SA

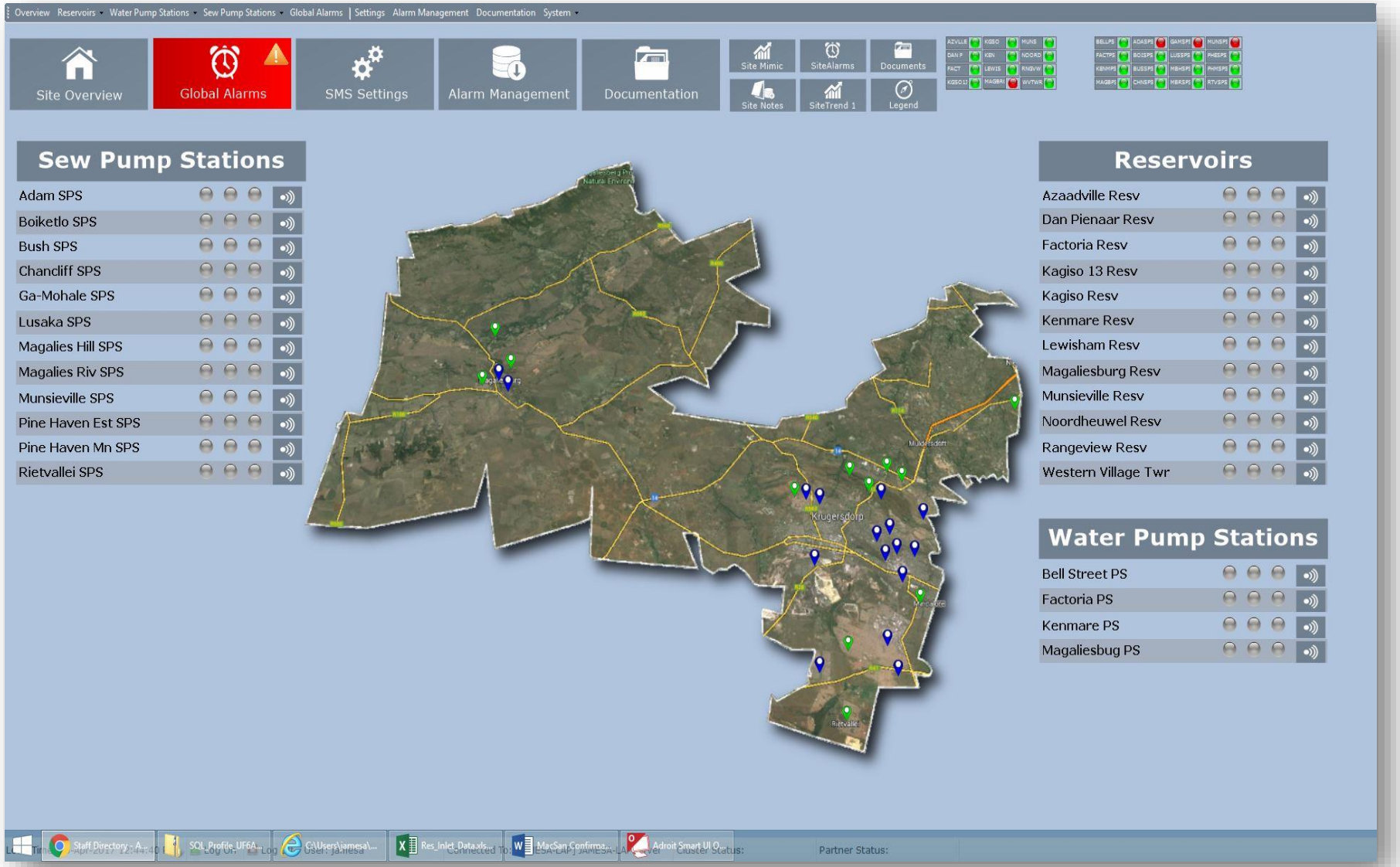
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Mogale City Municipality, South Africa

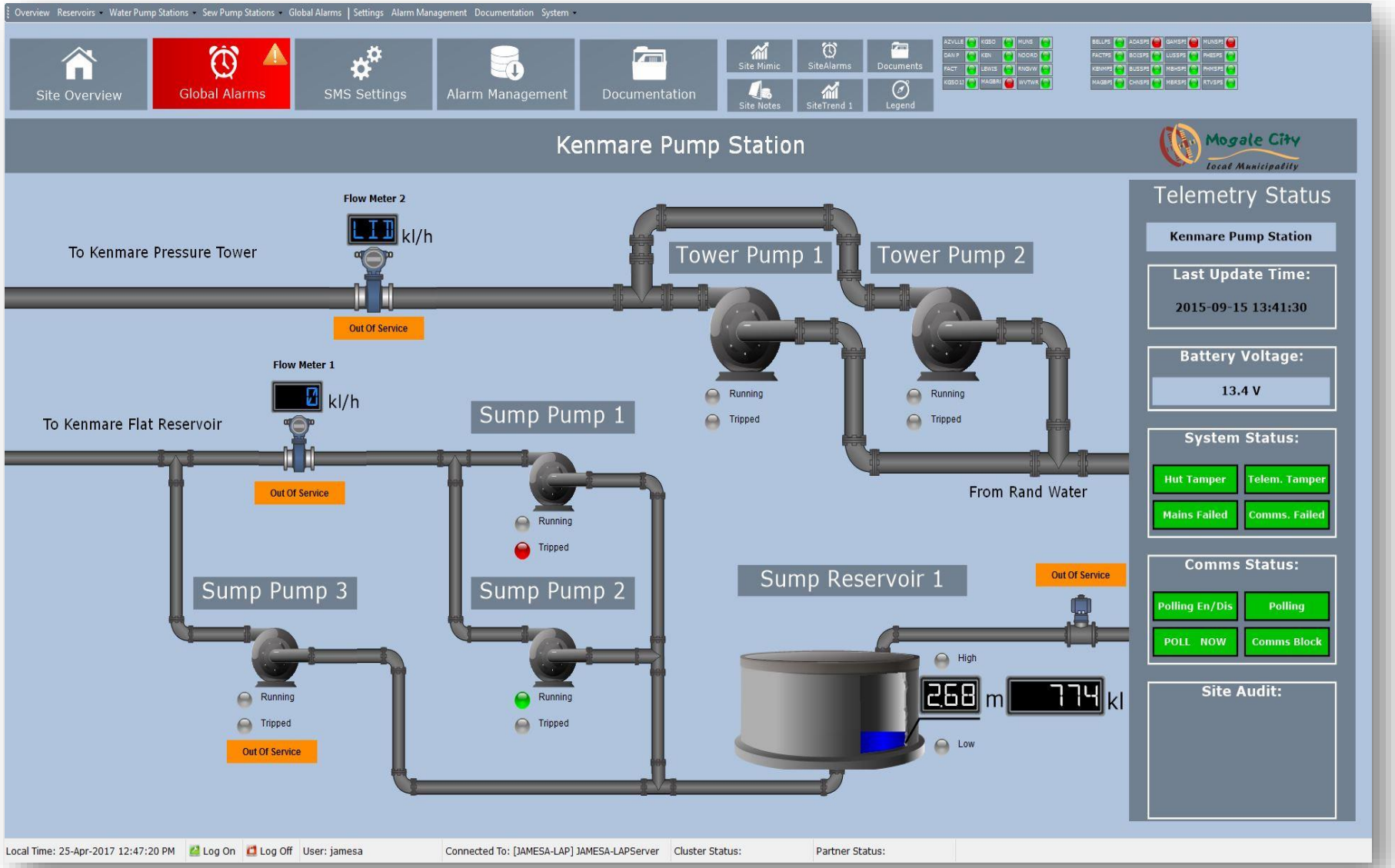
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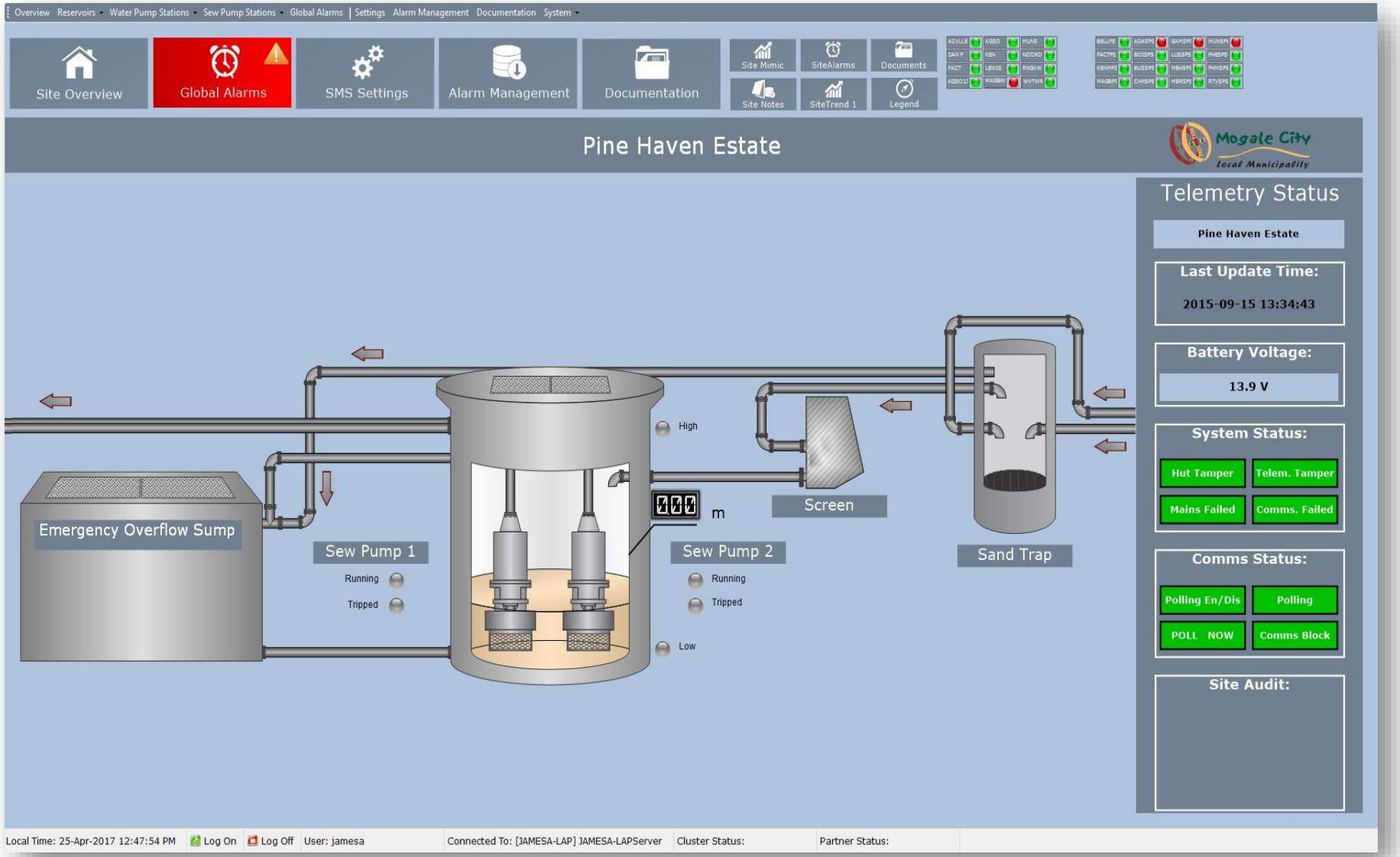
Mogale City Municipality, South Africa

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Mogale City Municipality, South Africa

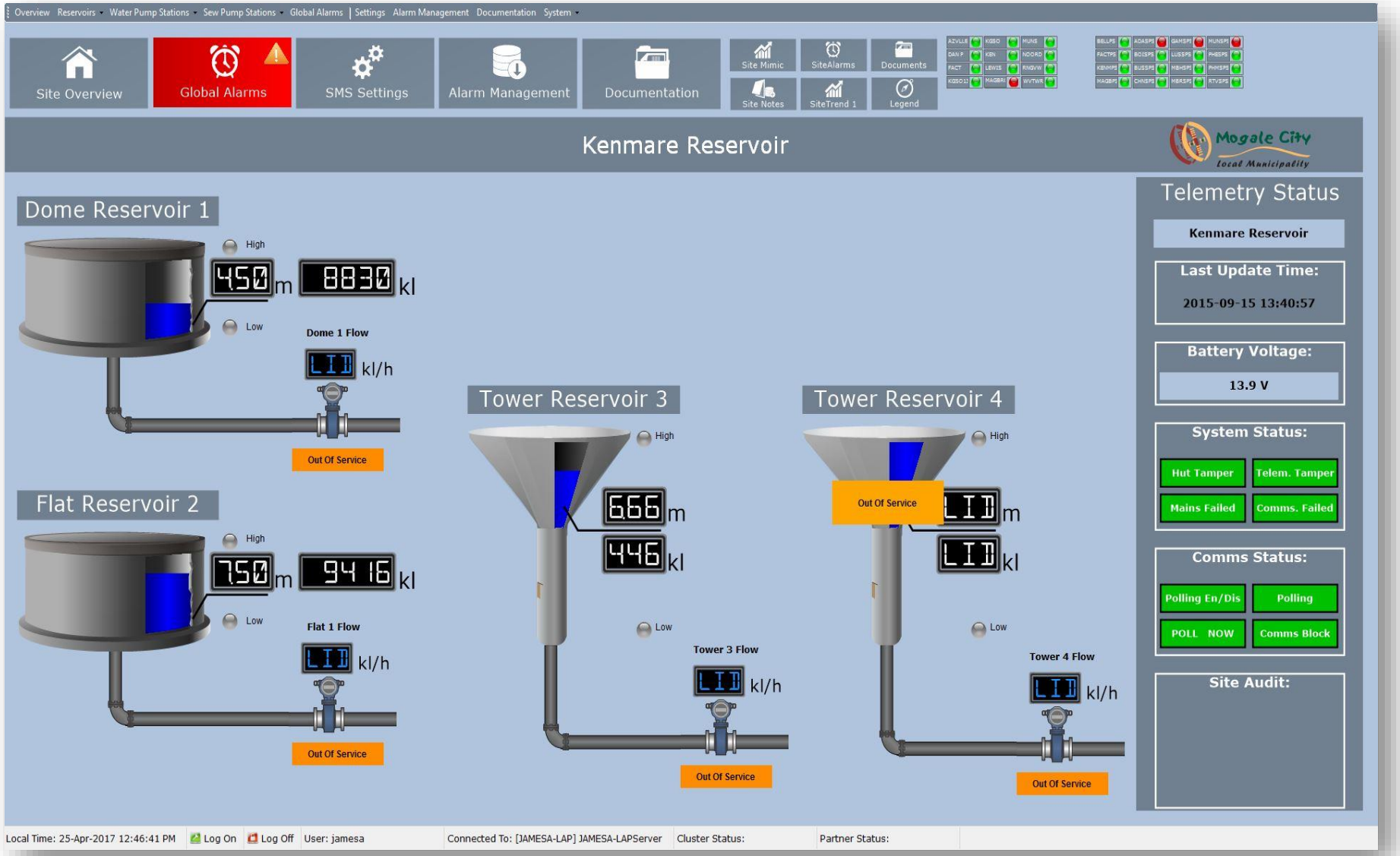


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Mogale City Municipality, South Africa

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Amatola Water, South Africa

The exponential growth of East London based Amatola Water's radio telemetry system from 16 outstations required a monitoring system that could meet its growing needs.

User friendliness was key – and the Amatola Water implemented a MAPS supervisory control and data (SCADA) system to fulfill its objectives.

Stand Alone Configuration

– 5000 Scan Points and 7 Remote Client Connections



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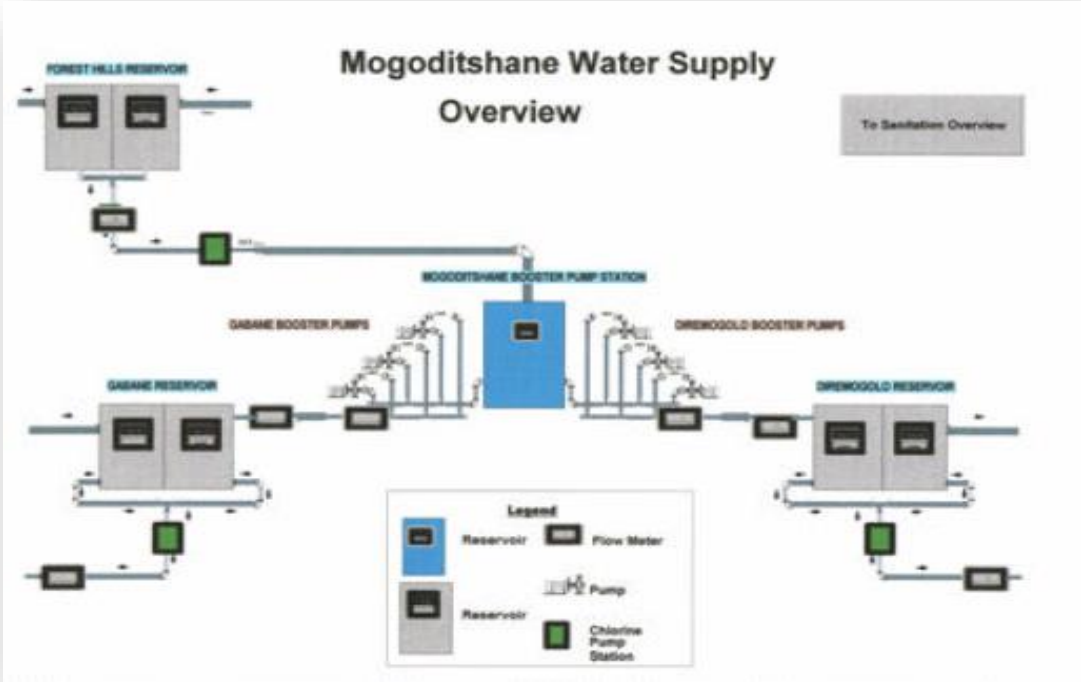
Botswana Water Affairs

The Mogoditshane Water and Sanitation Supply Project utilises the MAPS SCADA HMI as a stand-alone system in the Departments water management process: monitoring reservoir levels, pump status, flow meters and line pressure to ensure water supply to the Gaborone area.

Mogoditshane follows close on the heals of the countries largest water management project, North South Carrier, which boasts approximately 460km pipeline.

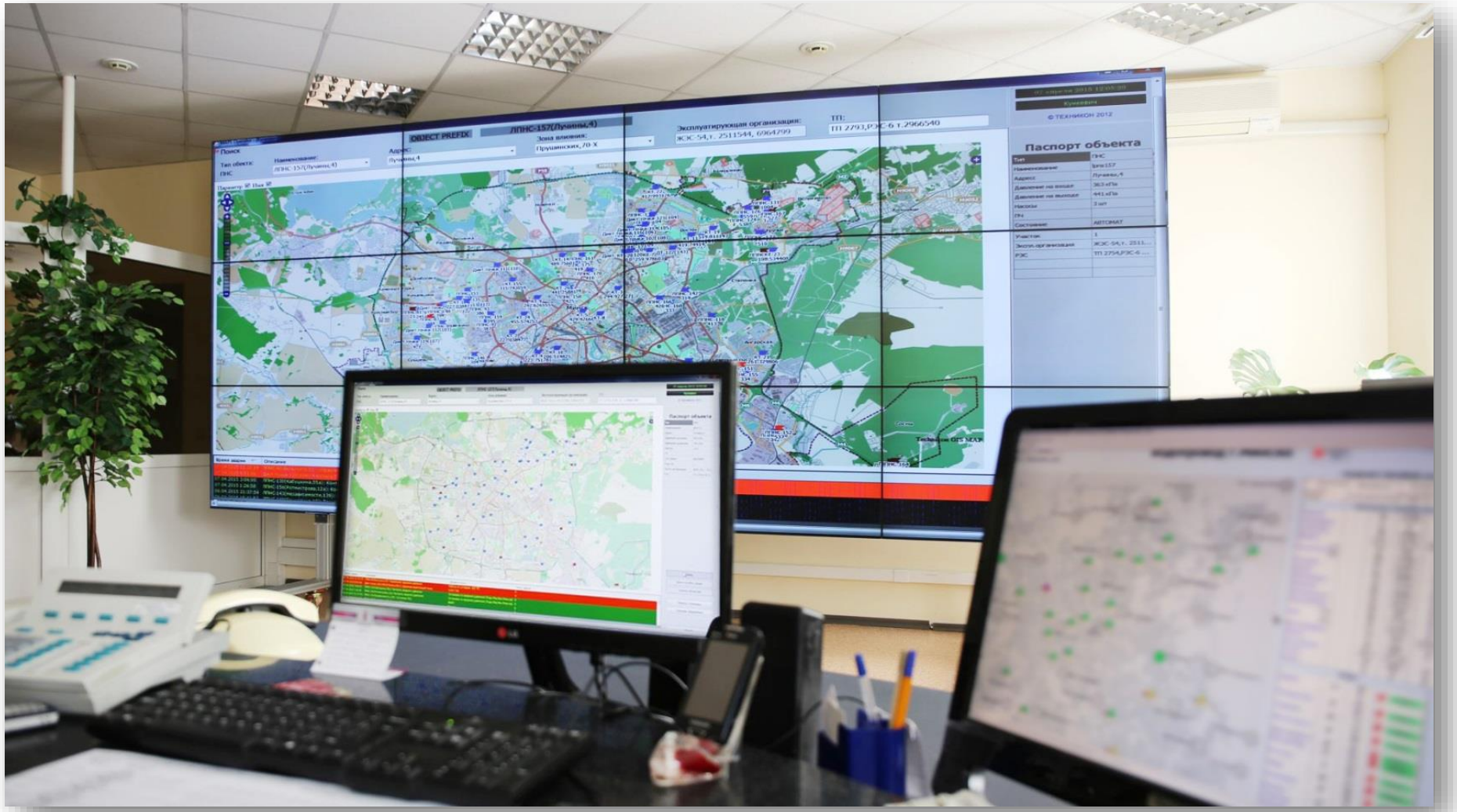
Stand Alone Configuration

– 25 000 Scan Points and 4 Remote Client Connections



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Europe : Minsk Water, Belarus



Minsk Water Utility Control Room

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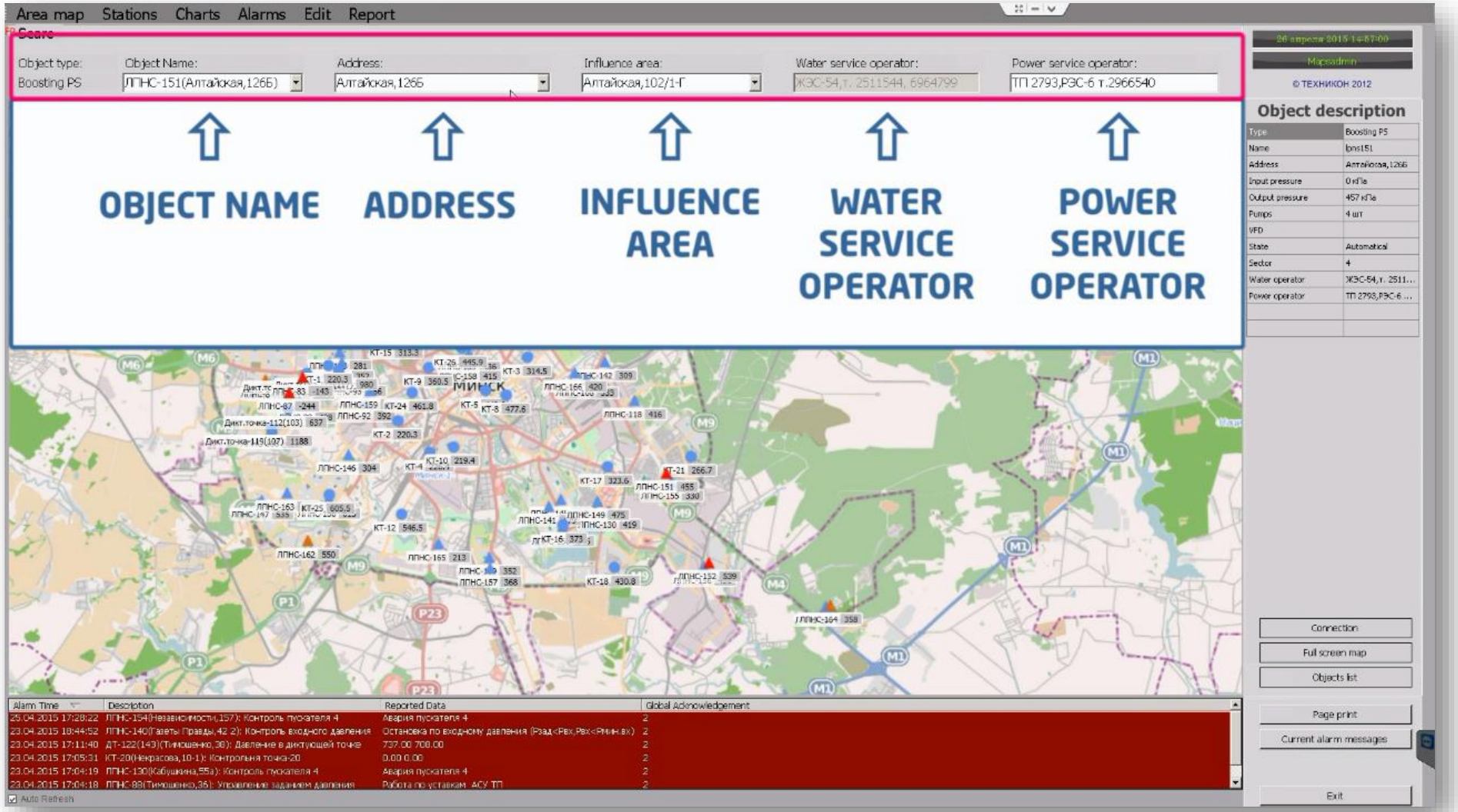
Europe : Minsk Water, Belarus



Overview Screen

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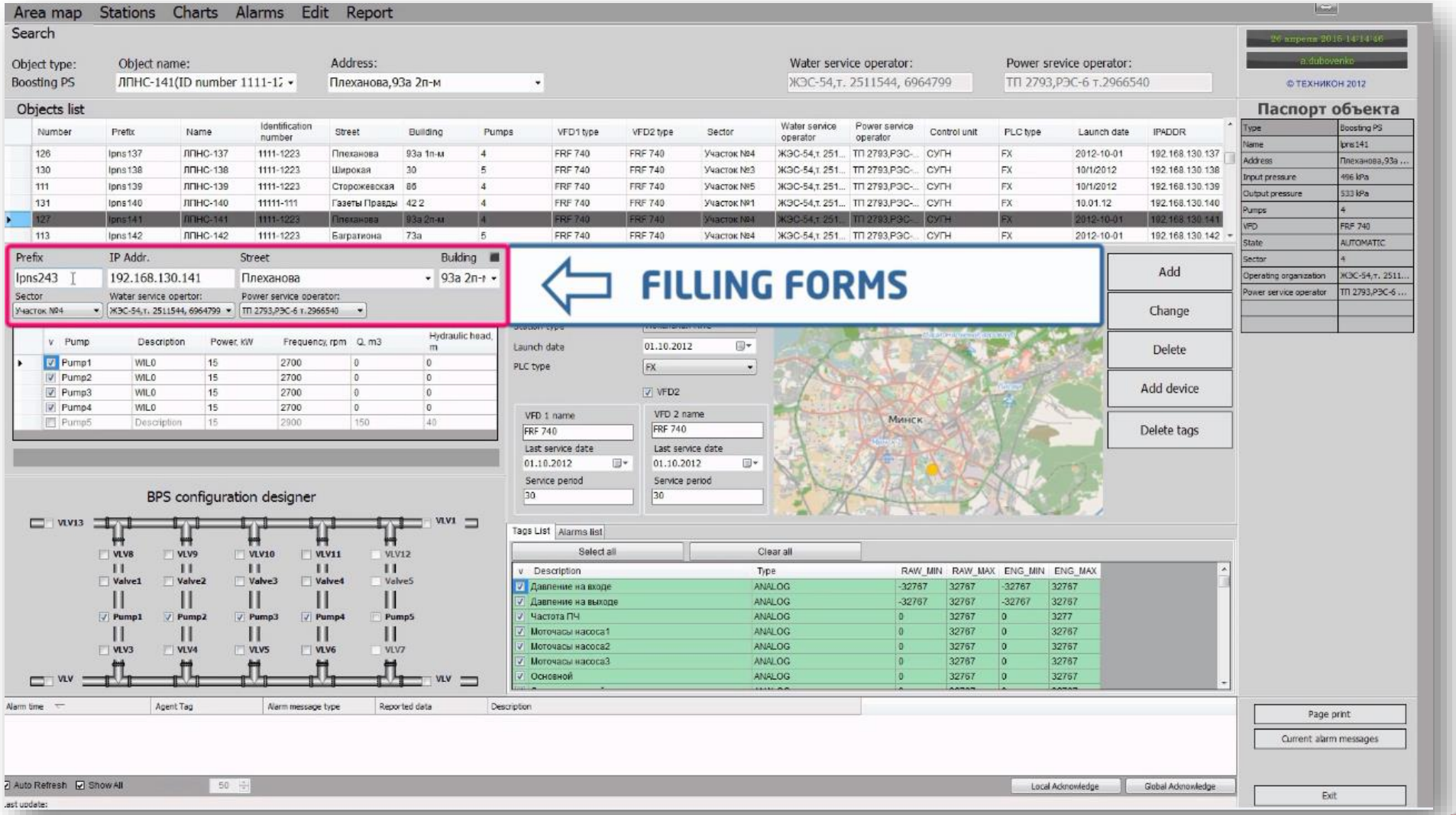
Europe : Minsk Water, Belarus



Adding a new pump station online (configuration only!)

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Europe : Minsk Water, Belarus



Online Overview of newly created pump station online

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