The Baish Dam is a gravity dam on Wadi Baish about 35km northeast of Baish in the Jizan Region of southwestern Saudi Arabia.

The dam has many purposes including flood control, irrigation and groundwater recharge. The total reservoir capacity of the dam is 192 million m³.

The dam was constructed between 2003 and 2009 and at 106m high on completion, it was the tallest dam in Saudi Arabia. It is owned and operated by the Ministry of Water and Electricity.

Baish dam is one of six dams currently undergoing the change from a manual to a fully-automated monitoring system.

The original instrumentation equipment was installed during construction and was entirely manually-read. The Ministry made the decision to upgrade the instrumentation to a modern automatic system including full data logging of all instruments together with alarm trigger levels and data access via the Internet.

After consultation with Ministry Engineers, Geosense designed a system installing new instruments side by side with the existing instrumentation and upgrading several areas to provide a fully-integrated and automatic dam safety monitoring system.

All the new instruments were connected into a data logging system and provide real-time visualisation within the dam control room.

The dam integrity is carried out by monitoring key areas as follows:

- **Main dam body**
  - Inclination

- **Galleries**
  - Expansion joints
  - Seepage
  - Upstream pore water pressures
  - Downstream pore water pressures

- **Dam main drain**
  - Seepage

- **Dam reservoir**
  - Water level

- **Dam abutments**
  - Settlement
  - Seismic monitoring

The products used include:

- **VW piezometers**
  - Measurement of pore water pressure.

- **AXMI 3D Inclinometers**
  - Combined Magnetic Extensometer & In-Place Inclinometer for both settlement and inclination profiles.

- **Pendulums & Telependulums**

- **VW triaxial crack gauges**
  - Measures expansion or contraction in the dam joints.

- **V-notch weir & monitor**
  - Measurement of seepage flows.

- **Remote Multiplexers**
  - Allows multiple sensor cables to be connected into one central location for connection to a data logger via one multi-core cable.

- **GeoLogger GL1000**
  - Multi-channel data logger for remote reading and logging all instruments.

- **Accelerometers & Recorders**
  - Measures seismic activity for early damage detection.

- **GeoAxiom Vista**
  - Data visualisation software. All data is fully accessible via the internet.