

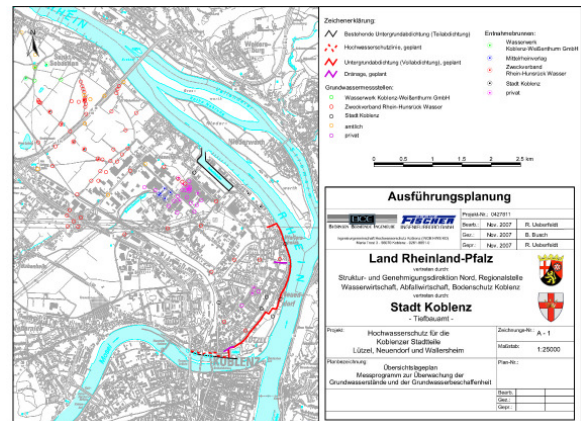


OTT Application Notes / Success Stories

## Flood Protection in Koblenz

Regional authorities of Rhineland-Palatinate, the town of Koblenz and Civil Engineering Office for Flood Protection Koblenz

Application of groundwater datalogger OTT Orpheus Mini



### Background

- Due to the geographic situation near the rivers Rhine and Mosel, Koblenz has always been facing flood problems.
- In the course of a flood protection concept of the town of Koblenz, the Rhine will be separated from the aquifer borne in unconsolidated rock by sealing measures alongside the river bed.
- Continuous measurements of the groundwater levels serve as a basis for the investigation of the modified hydrodynamics.
- Altogether, 6 existing and 5 new groundwater monitoring stations have been equipped with OTT Orpheus Mini groundwater dataloggers
- Remote data transmission of measured data via GSM/GPRS to a control center was not projected because the groundwater level data of these stations are not supposed to control any flood protection facilities.
- The groundwater monitoring stations might be upgraded with OTT ITC – intelligent top caps for remote data transmission via GSM/GPRS at any time.



OTT Orpheus Mini/ OTT CTD operating program



Urban measurement network – GWM at the Mosel bank with OTT Orpheus Mini

## Task

- Self contained, continuous measurement of groundwater level and temperature
- The data monitoring and storage interval is set to three times per day. According to the official approval of plans, the 8 hour - interval is sufficient for monitoring the groundwater situation, even in case of flooding.
- Data readout via software and PC
- Data evaluation and data export via software and PC

## Monitoring Solution

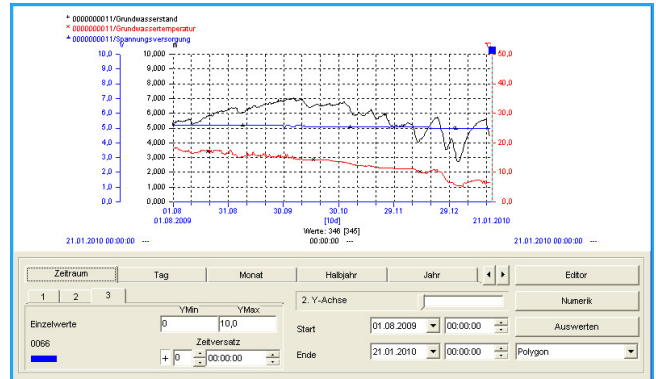
- OTT Orpheus Mini groundwater datalogger for the measurement of groundwater level, temperature and power supply.
- The sites were installed by the OTT HydroService and the SGD Nord, Koblenz.
- Use of software OTT Hydras 3 Basic and OTT Orpheus Mini operating program.
- Autarkic data readout on site and data evaluation is handled by engineering company 'Björnßen Beratende Ingenieure GmbH'



Urban measurement network – groundwater monitoring in the city with OTT Orpheus Mini

## Advantages – OTT Orpheus Mini:

- Reliable data monitoring
- Long-term stability
- Battery change on site without tools
- Triple flood protection
- Easy installation
- Simple read-out and parameterising software – OTT Hydras 3 Basic and OTT Orpheus Mini operating program



OTT Hydras 3 – data evaluation on groundwater level, temperature and power supply

## Summary

The groundwater monitoring sites in the urban measuring network in Koblenz are going to deliver continuous measurement data.

- 11 groundwater monitoring sites have been equipped.
- OTT measuring instruments are being deployed since May 2008.
- Simple handling of data enables efficient operational procedures.

More information on OTT solutions and OTT products:

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