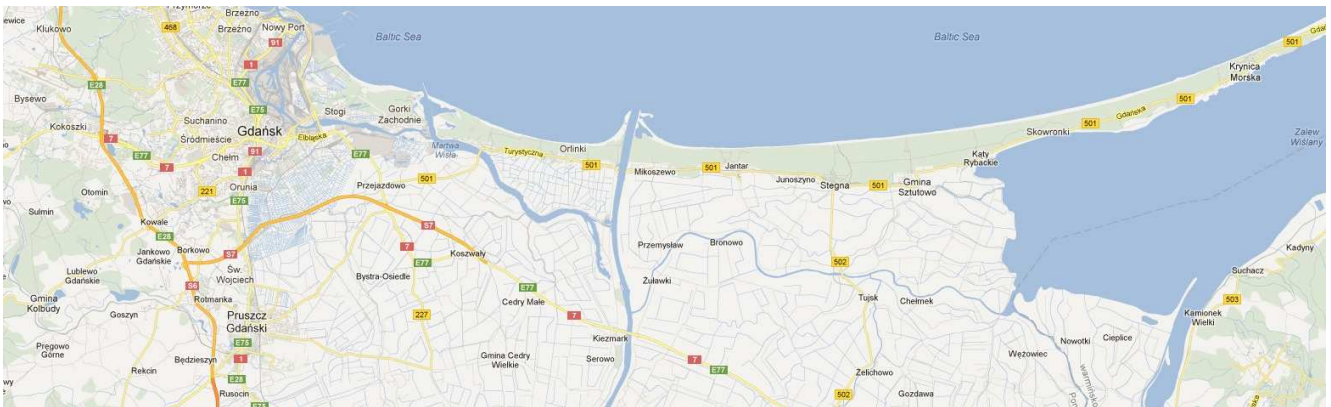




OTT Application Notes / Success Stories

Pilot station for “Complex flood protection program Zulawy 2030”, Gdansk – Poland Complete monitoring solution with OTT LogoSens2, OTT CBS, OTT Pluvio² and meteorological sensors



Background

Zulawy is a region which is located in the delta of Vistula River in north Poland. The area of Zulawy is about 175 000 ha, almost 26 % of which is situated below the sea level. Because of that Zulawy has an impressive melioration infrastructure – kilometers of channels, hundreds of small dams, lots of pumping stations

In 2010 Polish authorities decided to start the “Complex flood protection program – Zulawy 2030”. First part of this project should be realized until end of 2015 with a budget of about 45,000,000 EUR. The program has 5 main beneficiaries: RZGW Gdansk, ZMiUW Gdansk, ZZMiUW Elblag, City of Gdansk and City of Elblag. The main tasks for whole program are:

- Modernization of 400 km of river banks
- Construction (or reconstruction) of about 60 pumping stations
- Modernization of about 260 km rivers and streams
- Reconstruction of about 600 km of melioration channels
- Set up a measuring system and an operations center with access to hydrological and meteorological data from the whole Zulawy region

Task

- Build a measuring station as “pilot” of the whole measuring system
- Provide hydrological and meteorological data transfer to operations center with hourly intervals
- Log information of pump status (on/off, working time) for internal reporting
- Create visualization platform based on www interface



Installation site

Monitoring Solution

- **OTT LogoSens** as heart of the station
- **2 x CBS** for water level measurement on both sides of a dam
- **OTT Pluvio²** for reliable precipitation data
- **Thies WS WD** wind sensors
- **Vaisala HMP45d** as transmitter for temperature and humidity
- **Relays inputs** to log the status of 3 pumps
- Solar power supply
- GPRS data transmission
- Availability of real-time measurements in the Hydras 3 software
- Dedicated www application
- Steel cabinet with OTT LogoSens2, OTT CBS, OTT Solar and modem



Steel cabinet with OTT LogoSens2, OTT CBS, OTT Solar and modem

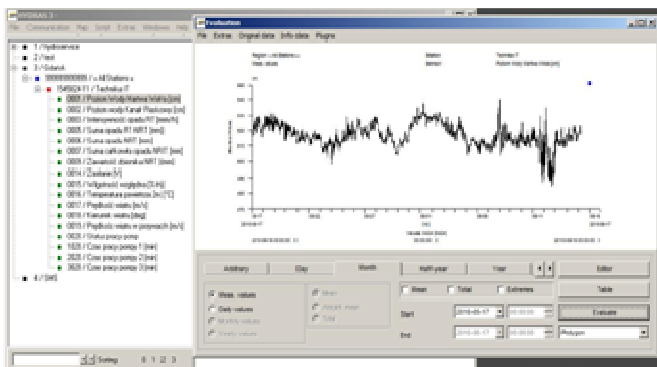
Summary

- Autarkic monitoring stations with continuous data transfer of water level and meteorological data
- Pilot for big measuring system
- Historical and real time data and evaluation
- Data access from Hydras 3 and dedicated WWW application
- Alarms for a specific hydro and meteo parameters number of specific parameters



Measuring station on a 10 m mast with solar panel

More information on solutions and products on www.ott.com



Technology

**OTT LogoSens2, OTT CBS, OTT Pluvio²,
Thies wind sensors
Vaisala HMP-45
GPRS transmission
Solar power supply**