



DHI SOLUTION

DATA COLLECTION AND FLOW MONITORING

Providing reliable information for management & planning

WHY DO WE MEASURE?

There are many challenges facing today's modern municipality, not the least of which is aging infrastructure. Many of the difficulties – sewage overflows, decreasing treatment plant capacities, rain related inflow & infiltration, water leakage – are easily addressed, as long as the correct information is available to fully understand and tackle the problem. Inaccurate and outdated information on aging or obsolete infrastructure makes planning and management very difficult. Dependable and accurate flow measurement data allows you to make well informed decisions on how to best address the challenges facing today's municipalities. Many of the modelling tools used today require some form of calibration against actual data. The better the data quality, the better the modelling results and the more secure we are in our management and planning decisions.

OUR SERVICES

We offer monitoring services in most areas of water management. DHI CZ, DHI SE & DHI NO have been performing flow measurements for over 20 years. Our services include:

- installation, calibration and maintenance of field instruments
- processing, analyzing and managing data
- performance of short – and long term monitoring campaigns



Flow meter installation in Trondheim, Norway

SUMMARY

CLIENT

- Municipalities
- Water operators
- Industry
- Hydropower
- Consultants and contractors
- Emergency response services

CHALLENGE

- Inaccurate or outdated information
- Ageing and/or obsolete infrastructure
- Absence of proper planning tools
- Global climate change
- Increased energy consumption
- Decreased system capacity
- Increased sewage treatment costs
- Stricter environmental regulation

SOLUTION

Dependable flow and precipitation measurements. This information can in turn be used to calibrate computer models describing the systems functionality.

VALUE

- Data acquisition
- Inflow/Infiltration detection
- Leak detection
- CSO behavior
- Early warning system
- Decreased energy consumption
- Cost effective management and planning solutions
- Reliable data allowing to make well-informed decisions

MEASUREMENT EQUIPMENT

At DHI, we use the best and most reliable equipment available for field measurements. We have many years of experience with equipment manufacturers. Over the years, we have developed a rigorous methodology for installing and controlling the equipment. This helps to provide the most accurate and continuous data possible.

Urban drainage monitoring

- Flow and level measurement in sewer systems, storm water systems and open channels
- Precipitation
- Water quality monitoring

Drinking water monitoring

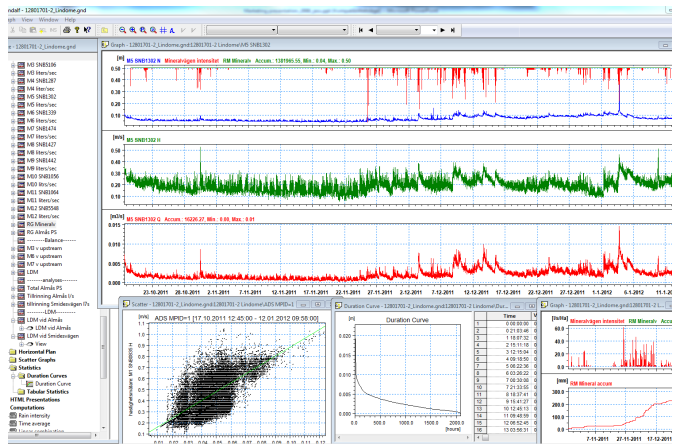
- Water levels
- Pressure and flow measurement in drinking water networks
- Water quality monitoring

Our teams are well equipped for field work, with specialised equipment for all environments, as well as safety equipment for working in confined spaces.

SOFTWARE

Data processing, analysis and reporting is an essential part of the complex monitoring services that we deliver.

GANDALF is the MIKE CUSTOMISED by DHI software which was developed in-house to support our field measurement campaigns. GANDALF allows for the processing, control and presentation of vast amounts of time series data from all types of equipment and other data sources. It has the added benefit of being able to seamlessly provide data in a format accepted by MIKE by DHI products.



GANDALF, our strong tool for time series data processing, management and reporting



Storm water channel outline pipe at the Prague airport, CZ



DHI employee installing a flow meter in Klippan, SE

- TYPICAL APPLICATIONS**
- Master Planning Projects
 - Flow measurement for model calibration
 - Inflow/Infiltration detection / Leakage detection
 - Flood Warning systems
 - Overflow/CSO studies
 - Pump station capacity studies



Pressure meter installation at hydrant in Teplice, CZ

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