Modrava 2
Mokruvka catchment, Czech Republic

Basin characteristics

River Basin / River Basin (according to EU-WFD)
Operation (from... to...)
Gauge coordinates / Gauge datum:
Catchment area:
Elevation range:
Basin type:
Climatic parameters:
Land use:
Soils:
Geology:
Hydrogeology:
Characteristics of water discharges:

Instrumentation and data

Measured hydrological parameters
Measuring period
Temporal resolution
Number of stations
Stream flow
1998 – cont.
2 (4) min
1
Precipitation
1998 – cont.
2002 - 2008
2 min
20 min
2
Air temperature
1998 – cont.
2002 – 2008
2008 – cont.
1 hour
20 min
15 min
2
Water conductivity
1998 – cont.
2002 – cont.
3 (1) hour
1

Applied models

1. Linear models
3. Unit hydrograph model
2. HEC – HMS
4. Day degree (snowmelt)

Main scientific results

1. Overland flow was observed on catchment during the rainstorm of high intensity. High peak discharges formed overland flow together with interflow.

2. The vegetation cover has a negligible role on generation of high volume runoff. These results were concluded from soil tension monitoring on Modrava 1 and 2 catchments during catastrophic floods in 2002. Maximum retention capacity of soil in both catchments was rather low in comparison with rainfall amount.

3. Water conductivity showed the reaction of catchment on fast changes in forest ecosystems due to Bark beetle calamity. Main growth of water conductivity was observed five years after harvesting of original forest.

Key references for the basin


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