



Water Resource Associates

A network of consultants in hydraulics, hydrology, groundwater & environmental issues

Project title: Hydrological of the River Houyoux

Summary: The Houyoux River is a partly rural, partly urban tributary of the Meuse in Belgium. As part of measures to improve the quality of the Meuse, a hydrological study was needed to determine what the proportion of the flow came from the urban part.

Client: Namur City Council	Financed by: Namur City Council
Period of assignment: 1997	Location: Belgium
Project Value: Unknown	WRA services: Short-term specialist consultancy
In co-operation with: Tractebel	
	<p>Background</p> <p>The Houyoux is a 75 km² tributary of River Meuse in Belgium. Whilst the river rises in a rural area it flows through part of the city of Namur before entering the Meuse. As part of a programme to improve the quality of the Meuse it was necessary to know the proportion of rural versus urban flow of the Houyoux.</p> <p>Scope of work by Water Resource Associates Ltd</p> <p>The Houyoux catchment was studied in two complementary ways. Firstly HYSIM was using daily data. Next 40 years of daily flow were simulated. This was to establish the pattern of urban and rural flows and the frequency of flooding. Secondly HYSIM was used to simulate two major floods which occurred in the summer of 1996 using hourly data. The adjoining graphs show the results of these simulations which were based on the parameter set obtained from calibration of the daily simulation.</p> <p>Results</p> <p>The floods of 1996 were placed in their historical context. The relative contribution of urban and rural runoff was identified for storms of known return periods enabling design of grit traps to proceed.</p>

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