Contents

Controuting Authors	Vii
Preface	ix
Acknowledgments	13
Mixing Models for Water Quality Management in Rivers: Contir Instantaneous Pollutant Releases GERHARD H. JIRKA AND VOLKER WEITBRECHT	nuous and 1 1
Three-Dimensional Model of Flow and Mixing Processes in Ope	n Channels
WŁODZIMIERZ CZERNUSZENKO ¹ AND ALEXEY RYLOV ²	35 35
Horizontal Mixing in Shallow Flows BRAM C. VAN PROOIJEN ¹ AND WIM S.J. UIJTTEWAAL ²	55 55
On the Theoretical Prediction of Longitudinal Dispersion Coeffic	eients in a
Compound Channel STEVE WALLIS ¹ AND RUSSELL MANSON ²	69 69
Application of a Transient Storage Model to Meandering Channe	l Studies of
Solute Transport and Dispersion IAN GUYMER ¹ AND RICHARD DUTTON ²	85 85
Experimental Study of Travel Times in a Small Stream	109

Water Quality Hazards and Dispersion of Pollutants

STEVE WALLIS	109
Migration of Floating Particles in a Compound Channel	121
PAWEŁ M. ROWIŃSKI ¹ , WŁODZIMIERZ CZERNUSZENKO ¹ AND	MARCIN
Krukowski ²	121
Persistence of Skewness of Concentration Distribution	143
ALBERT VAN MAZIJK AND ED J.M. VELING	143
Moments and Analytical Solution of Coupled Equation Describing	Γransport
of Pollutants in Rivers	169
Ed J. M. Velling	169
Influence of Hyporheic Exchange on Solute Transport in a Highly	
Hydropower Regulated River	185
KARIN JONSSON ¹ AND ANDERS WÖRMAN ²	185
Models of Hyporheic Contamination by Non Reactive Solutes, Meta	als and
Colloids	215
ANDREA MARION	215
The Flow in Groyne Fields	231
WITH C I THEFTENIAAI	231