

Program

Groundwater Modelling School
Brisbane
Monday, Day 1



NATIONAL CENTRE FOR
GROUNDWATER
RESEARCH AND TRAINING

TIME		THEME/TOPIC	PRESENTER
8.30		Registrations and Coffee	
8.45		Welcome	Michael Teubner
9.00	1	Groundwater Flow <ul style="list-style-type: none">• What is groundwater• Aquifers & aquitards• Groundwater flow systems	Michael Teubner
10.00	2	Basic Equations of Flow <ul style="list-style-type: none">• Darcy's Law• Equations governing groundwater flow• Steady-state versus transient flow	Michael Teubner
11.00		Morning Tea	
11.15	3	Analytical Groundwater Modelling <ul style="list-style-type: none">• Simple models and solutions• Applications	Michael Teubner
12.30		Lunch	
13.30	4	Introduction to Numerical Modelling <ul style="list-style-type: none">• Basic concepts of running a modelling code• Introduction to Tutorial 1, Steady-state Flow	Michael Teubner
14.45		Afternoon Tea	
15.00	5	Modelling Tutorial 1 <ul style="list-style-type: none">• Data entry• Model simulations	Michael Teubner
16.30		<ul style="list-style-type: none">• Discussion of tutorial 1 model	Michael Teubner
17.00		End Day 1	

Groundwater Modelling School
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Tuesday, Day 2



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TIME		THEME/TOPIC	PRESENTER
9.00	6	Groundwater Modelling <ul style="list-style-type: none"> The process of modelling 	Michael Teubner
10.00	7	Developing a Numerical Model <ul style="list-style-type: none"> Grid scheme Model boundaries Boundary conditions Aquifer parameters Aquifer stresses 	Michael Teubner
11.00		Morning Tea	
11.15	8	Introduction to MODFLOW <ul style="list-style-type: none"> MODFLOW: history What MODFLOW is and what can it do 	Michael Teubner
12.30		Lunch	
13.30	9	Introduction to Tutorial 2 <ul style="list-style-type: none"> Tutorial 2 conceptual model Discussion of tutorial 2 numerical model 	Michael Teubner
14.35		Afternoon Tea	
15.00	10	Modelling Tutorial 2 <ul style="list-style-type: none"> Data entry Model simulations 	Michael Teubner
16.30		<ul style="list-style-type: none"> Discussion of tutorial 2 model 	Michael Teubner
17.00		End Day 2	

Groundwater Modelling School
Brisbane
Wednesday, Day 3



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TIME		THEME/TOPIC	PRESENTER
9.00	11	Code Selection <ul style="list-style-type: none"> Differences between finite difference, finite volume and finite element codes MODFLOW packages Data input Pitfalls and limitations 	Michael Teubner
11.00		Morning Tea	
11.15	12	Model Calibration and Validation <ul style="list-style-type: none"> What is Calibration and how is it used Model Validation 	Michael Teubner
12.30		Lunch	
13.30	13	Introduction to Tutorial 3 <ul style="list-style-type: none"> Tutorial 3 conceptual model Development of tutorial 3 numerical model 	Michael Teubner
14.45		Afternoon Tea	
15.00	14	Modelling Tutorial 3 <ul style="list-style-type: none"> Data entry Model simulations 	Michael Teubner
16.30		<ul style="list-style-type: none"> Discussion of tutorial 3 model 	Michael Teubner
17.00		End Day 3	

Groundwater Modelling School
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Thursday, Day 4



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TIME		THEME/TOPIC	PRESENTER
9.00	15	A Real Groundwater Flow Model <ul style="list-style-type: none"> Developing a real model Data needs Documentation Report review 	Michael Teubner
10.00	16	Modelling Guidelines <ul style="list-style-type: none"> Presentation of Modelling Guidelines Limitations Management, regulatory considerations 	Michael Teubner
11.00		Morning Tea	
11.15	17	Advanced Topics <ul style="list-style-type: none"> Modelling 3-D Flow Contaminant Transport Modelling Modelling Unsaturated Zone Flow Groundwater-Surface Water Interactions Fracture Flow Modelling Heat Transport 	Michael Teubner
12.30		Lunch	
13.30	18	Estimating Transport from Flow Modelling <ul style="list-style-type: none"> Introduction to Tutorial 4 	Michael Teubner
14.45		Afternoon Tea	
15.00	19	Modelling Tutorial 4 <ul style="list-style-type: none"> Data entry Model simulations 	Michael Teubner
16.30		<ul style="list-style-type: none"> Discussion of tutorial 4 model 	Michael Teubner
17.00		End of School	