



Water Quality

Healthy water is essential for life. A lot of policy (e.g. related to European Water Framework Directive) is aimed to protect or improve quality and ecology of water systems. With SOBEK-Rural 1DWAQ you can simulate water quality processes to investigate eutrophication, oxygen deficit, transportation of pollution or salt. During the one day course you will work with SOBEK-Rural 1DWAQ. Aim of this course is to extend your modelling toolkit with water quality modelling and improve your modelling skills.

Course background:

Water Quality is dedicated to SOBEK-Rural 1DWAQ. SOBEK-Rural 1DWAQ is an excellent tool for simulating water quality processes in 1D networks of SOBEK-Rural 1DFLOW or SOBEK-River 1DFLOW. It contains an extensive process library that covers standard chemical, physical and biological processes. A selection of various explicit and implicit solvers is available.

Participants:

The course is aimed at river engineers and modellers from consultancy and engineering companies, provinces, water boards, municipalities and universities. The participants should have knowledge in basic hydrodynamic modelling in SOBEK. Some background in water quality issues is recommended.

Aim of the course:

The goal of the Water Quality course is that the participant gets familiar with water quality modelling in SOBEK. The course focuses on how to use the SOBEK-Rural 1DWAQ module. The main subjects of the course are:

- An introduction to water quality problems and how to make a water quality model;
- Introduction in fraction calculations (tracer calculations);



- Extend the basic model to a water quality model related to BOD and oxygen;
- How to analyze the results of the model by concentration, mass balances and mass fluxes;
- Dealing with numerical aspects of Sobek - WAQ.

After the course the participants have more experience in how to set up a water quality model in SOBEK and how to analyze the results of the model. Also the participants learn the basics in solving errors in the (hydrodynamic) models and learn how to use the benefits of fraction calculations during the calibration of hydrodynamic models.

Program:

The program of Water Quality (in brief):

- Presentation: Theory on water quality;
- Exercise: How to set up a waterquality model (fractions);

- Exercise: Simple Oxygen model;
- Presentation: Introduction on numerical aspects;
- Exercise: The Amstel river basin;
- Exercise: Eutrofication model of the Veluwe Randmeren.

Course leader:

E.M. Meijers, Deltares.

Fee:

The costs for this 1 day course, from 9:30 to 17:00 hrs, is € 565,- excluding VAT.

50% discount for lecturers at centres of education.

Certificate:

We provide a certificate of participation.



Course date:

Thursday, 22 April 2010.

Thursday, 30 September 2010.

Location:

Deltares, Stieltjesweg 2, 2628 CK Delft,
The Netherlands.

Registration:

Please use the electronic form for registration at www.deltaressystems.com and choose 'Agenda'.

Transportation:

From Schiphol Airport a train is leaving for Leiden Central Station every 20 minutes. Here you have to change trains to Delft Central Station (total travelling time approximately 45 minutes).

More information:

All presentations and discussions will be in English. For more information, please visit our website www.deltaressystems.com or contact the course coordinators, Carla van den Kieboom, Wendy Boerhave or Nancy Dijkhuizen, telephone +31 88 3357909 or e-mail: sales@deltaressystems.com.

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Deltares Academy is a training facility of Deltares.