Capability Statement
Flood forecasting & Warning systems

WATER TECHNOLOGY
WATER, COASTAL & ENVIRONMENTAL CONSULTANTS

Capabilities

- Integrated Flood Forecasting and Warning System design
- Co-ordination of the instrumentation procurement and installation process
- Hydrologic and hydraulic model establishment for real time predictive purposes
- System implementation and commissioning
- System documentation
- Provision of detailed training courses for system operators
- Inter-Agency co-ordination
- Establishment of processes to ensure continual improvement of the system

Overview

Developing hydrologic and hydraulic systems for real time flood forecasting purposes presents significantly different challenges to those investigations that can be conducted from a historical perspective. Flood forecasting systems must not only be capable of simulating flood flows and accurately providing predictions, they must be practical and reliable to use in an emergency situation. Amongst other requirements, it is vital that they are intuitive, rapid and above all robust in their application.

Water Technology has significant experience, both within Australia and internationally, in establishing state-of-the-art Flood Forecasting Systems. This experience covers all aspects of system design and layout including selection of appropriate monitoring locations, numerical model selection and development, and implementation of the real-time operational systems. We promote a multidisciplinary approach and possess the leadership and project management skills and experience to successfully co-ordinate various key system elements including instrumentation, communication, modelling and IT management.

As it is seldom the flood warning system developers who are in charge of real time operation, it is vital that the real-time system be deployed with complete documentation and training. As part of the system technological transfer, Water Technology provides detailed technical manuals, technical and IT background documentation, detailed on-site training in system operation, simulated flood emergency situations and troubleshooting.

It is vital that ongoing and continuous improvement of these systems be maintained. We provide ongoing review of the implemented flood forecasting operations and an analysis of the accuracy and/or reliability that has been achieved. We offer services to implement system enhancements, and provide advanced training to operators to facilitate self-maintenance of systems.

Key Projects

Yangtze River Flood Control and Management Project

Client: AusAid via SAGRIC International Pty Ltd, in association with Coffey MPW Pty Ltd and Water Studies Pty Ltd, all members of the Coffey Group of Companies

Water Technology has been responsible for procurement, establishment and implementation of hydraulic modelling systems as part of the Flood Forecasting System (FFS) and Decision Support Systems (DSS) for the Yangtze River, China, the third largest river in the world. We have developed and implemented a range of one and two dimensional models of the river for use in

the Flood Forecasting and Options Analysis for flood relief actions. Our staff have a key role in the ongoing training and technology transfer of these systems to our counterpart engineers in China.

Shepparton Mooroopna Flood Warning and Emergency Management Project

Client: City of Greater Shepparton and Goulburn Broken Catchment Authority

Shepparton Mooroopna lies at the confluence of three major river systems: the Goulburn River, Broken River, and Seven Creeks. To improve flood forecast reliability, the existing data collection network is being augmented. Water Technology is managing the assessment and implementation of the data collection network. The underlying fundamental requirement of a flood warning system is to provide the affected residents with timely and reliable flood information and advice on appropriate action. As part of the project, Water Technology is investigating the potential use of an automated telephone alert service to affected residents. Further, each flooded property will be provided with specific flood advice regarding likely inundation and evacuation routes over a range of flood magnitudes.

15 Business Park Drive, Notting Hill Victoria Australia 3168 tel: 61 (03) 9558 9366 fax: 61 (03) 9558 9365 web: www.watech.com.au