AdaptWater™

CLIMATE CHANGE ADAPTATION TOOL FOR THE AUSTRALIAN URBAN WATER SECTOR

INTRODUCTION TO ADAPTWATER

AdaptWater is a climate change adaptation quantification tool for the water industry.

AdaptWater takes into account uncertainty, time, spatial and technical information through a systems analysis approach. AdaptWater provides a comprehensive picture of the complexity of modern water utilities' direct and indirect climate change risks that need to be considered in decision making processes. AdaptWater provides flexible adaptation pathways and plausible estimates of the cost-effectiveness of these adaptations.

Features of AdaptWater

- Provides an independent and consistent basis with which internal and external decision makers can consider how to manage climate change for the current and future benefit of the customers and the utility
- Informs adaptation plans with robust and transparent data and analysis
- Enables the user to run scenarios and determine the impact on key financial, operational, and environmental performance indicators
- Strategically identifies and compares adaptation options to find the most cost effective solution
- Provides a flexible yet robust risk management investment/adaptation approach acceptable to stakeholders
- Effectively presents and communicates climate change adaptation opportunities to management and stakeholders, including financial controllers, independent regulators and environmental authorities.

Project Scope

The project will be developed and delivered in six modules:

Module 1: Sydney Water prototype model based on a discrete area of operations, three key hazards and only wastewater assets. Module 1 was completed in December 2011

Module 2: Expansion of prototype model developed in Module 1 to two Water Services of Association of Australia (WSAA) member utilities: Melbourne Water and SA Water. Module 2 is scheduled to be completed in May 2012

Module 3: Pilot model to cover all more complex hazards and both water and wastewater asset types within the discrete area within Sydney Water. Module 3 is to be completed in May 2012

Module 4: Piloting of an extended WSAA model with member utilities contributing funding to the project (Melbourne Water, SA Water, Water Corporation and Queensland Urban Utilities) to be completed in July 2012

Module 5: Roll-out of the AdaptWater Tool to all of Sydney Water

Module 6: Roll-out of the AdaptWater Tool to WSAA members.

SYDNEY WATER MODULES

MODULE 1
Sydney Water Prototype
Develop a prototype model for coastal wastewater infrastructure. Multiple but limited hazards, asset types area and system complexity.

MODULE 3
Sydney Water Pilot
Extend to include water supply assets, additional system complexity, climate hazards, but same area.

MODULE 5
Sydney Water Roll-Out
Extended to cover all required assets, all key system elements, all climate hazards. Roll-out across all Sydney Water geographical coverage.

WSAA MODULES

MODULE 2
WSAA Prototype
Expansion of prototype model developed in Module 1 to two Water Services of Association of Australia (WSAA) member utilities.

MODULE 4
WSAA Pilot
Piloting of an extended WSAA model with member utilities contributing funding to the project.

MODULE 6
WSAA Roll-Out
Extend Sydney Water Prototype into generally applicable tool for WSAA member utilities.

HOW DOES IT WORK?

The AdaptWater Tool has been developed in partnership with the water utilities to deliver a tool tailored to industry challenges and operational drivers. The Tool is owned and maintained by WSAA and will be delivered online.

AdaptWater works by first presenting the potential climate change impacts by exposing the system to climate change hazards. The consequences of these climate change hazards are calculated and assessed, in terms of the risk they present to key performance indicators. Once this risk is established, it is then possible to apply different adaptation actions to the system to explore how they reduce risk. This can be done repeatedly, allowing different adaptation plans to be compiled and compared.

WHO IS INVOLVED?

AdaptWater is being undertaken by project partners the Water Services Association of Australia (WSAA), Sydney Water and Climate Risk Pty Ltd. The Department of Climate Change and Energy Efficiency (DCCEE) has provided co-funding to the project. In addition to Sydney Water, WSAA members Melbourne Water, SA Water, Water Corporation, Queensland Urban Utilities (QUU) and City West Water are participating in the tool development prototype and pilot phases.

WANT TO KNOW MORE?

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