



Mount Lofty Ranges E2 Model

—frequently asked questions

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Will the Mount Lofty Ranges E2 Model solve water quality issues in the Mount Lofty Ranges Watershed?

No, it is a decision support tool and can assist in providing additional science-based information and in prioritising water quality issues. It can also direct policy to resolve water quality issues in the Mount Lofty Ranges Watershed.

Will the Mount Lofty Ranges E2 Model tell me how to best deal with certain diffuse source pollution problems in the Mount Lofty Ranges Watershed?

Yes, if used in combination with on-ground data and local knowledge, the Mount Lofty Ranges E2 Model is a decision support tool which can help prioritise issues and support a holistic approach to dealing with diffuse source pollution problems in the Mount Lofty Ranges Watershed.

How credible/accurate is the information/outputs provided from the Mount Lofty Ranges E2 Model?

As with any computer based catchment modelling, the outputs from the Mount Lofty Ranges E2 Model are only as good as the data inputs. The model uses the best available local data and during the development phase is rigorously calibrated and validated.

Does the Mount Lofty Ranges E2 Model have a maximum number of 'functional units' (land uses)?

There are no limitations to the number of functional units the model can have. However, a balance needs to be struck between spatial and temporal scale and the existing and future data sets available to underpin the model.

Are error margins included in the Mount Lofty Ranges E2 Model?

Not currently. The E2 modelling framework is continuously being scrutinised, enhanced and developed via the eWater CRC, a cooperative with a focus on developing tools for the water industry, both private and public.

How are results/outputs of the Mount Lofty Ranges E2 Model calibrated and validated?

Both the water quality and hydrology components of the model are calibrated. Local data from the Mount Lofty Ranges are collected and run through a series of models. Ongoing calibration and validation are achieved via continuing hydrologic and water quality sampling across a broad spatial and temporal extent, and the subsequent inclusion of those results into the modelling process.

How much monitoring (data) is required to make the model work?

The continuity and program consistency of most data sets is always an issue. However, having at the very least a minimum of 10 years' data is a rough guide.

Can I use the model?

Currently, the model is set up only for the use by technicians. It is envisaged that, in the future, the model will be able to be used by an additional two levels of users, nominally referred to as managers and community users.

How long does it take to answer a water quality question using the Mount Lofty Ranges E2 Model?

The time taken for the model to run depends on the scenario or problem posed. Therefore it is variable. Time is generally needed to ensure that the data required to answer specific problems or deal with particular scenarios are correct and sufficient before running the model.

In the absence of up-to-date land-use information for the Watershed, how can the Mount Lofty Ranges E2 Model provide useful predictions of nutrient and sediment loads from various catchments and sub-catchments?

The Mount Lofty Ranges E2 Model has the capacity to provide competent, science-based predictions on water quality, including nutrient and sediment loads. If a specific issue needs to be addressed, the land use and any applicable data set can be updated and utilised. This is currently being undertaken for a project in the Myponga Catchment.

Why has land use in the Watershed been broken down into so few functional units for water quality modelling purposes?

The Mount Lofty Ranges E2 Model is a baseline model. It enables prioritisation of issues and supports policy development. For more specific issues, the existing framework is used to develop a more detailed E2 model; hence, providing more functional units (land uses) if required.

Have the water quality benefits of farm dams and onstream reservoirs been factored into the Mount Lofty Ranges E2 Model?

There is currently no farm dam component to the Mount Lofty Ranges E2 Model. A storage model component is about to be added to the Model and eWater CRC or Cooperative Research Centre is currently working on incorporating a farm dam component into the E2 framework. In the future, water quality benefits of farm dams and onstream reservoirs will be factored into the model.

Related readings

South Australian Environment Protection Authority 2007, [EPA Information Sheet—E2 Catchment Modelling Framework](#), EPA, Adelaide, viewed 5 June 2007, <www.epa.sa.gov.au>.

—2007, [EPA Information Sheet— Mount Lofty Ranges E2 Model](#), EPA, Adelaide, viewed 5 June 2007, <www.epa.sa.gov.au>.

FURTHER INFORMATION

For further information go to <www.toolkit.net.au/e2> or <www.epa.sa.gov.au/watershed>.

You can also contact:

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