

Design and deliver environmental flows to benefit an ecological asset.



Are you a manager of environmental water allocations? Do you need a quick way of deciding how to augment existing flows to meet environmental as well as human objectives?

eFlow Predictor is a standalone software tool that is designed to help you; it calculates the amounts of water required to provide flows that meet a set of environmental needs.

For many catchments, the river environments' water requirements are based on the recommendations of expert panels detailing a range of flow components needed to satisfy a variety of individual flow targets.

To supply the recommended flow components, the existing flow regime in a river must be augmented in an efficient way.

This is where eFlow Predictor comes into its own. eFlow Predictor defines the water volumes, day-by-day, needed to achieve the recommended environmental flows. The calculated volumes involved are clearly set out.

The river environment is a legitimate user of freshwater, but river managers are often under pressure to deliver water first to uses that have measurable economic value and benefits. To date, benefits to river ecosystems have not been measurable in those terms.

eFlow Predictor is designed to help environmental water managers predict the volumes that will meet an ecosystem's flow requirements, even when the flow patterns required differ from those in normal use in rivers.

This allows objective comparison of the flows needed for environmental and human uses from the same river. Possible tradeoffs can be seen and planned for.

eFlow Predictor is a dedicated environmental flow allocation tool available to help with the planning of environmental flows in rivers.

KEY FEATURES:

- eFlow Predictor is valuable whether there is enough water in your catchment, or too little.
- When water is scarce, eFlow Predictor helps you decide which flow components your meagre allocation can best provide. You can explore how to produce several ecological benefits from a single carefully arranged flow.
- Where there is ample water, the tool calculates how big an allocation you need to meet environmental objectives, and how or when to deliver it most effectively.

Now available
Click to find out more

eFlow Predictor



How it works

eFlow Predictor is user-friendly software that diagrammatically represents your river components: the source, environmental target, and delivery channel.

You enter:

- a time series of existing flow and natural flow for the river
- recommended environmental flow components (e.g. baseflows, freshes, bankfull and overbank flows)
- the rules for each component (e.g. frequency, volumes and timing)
- each component's intended role (e.g. refreshing habitats, stimulating in-channel vegetation, supporting riverbank stability)
- any requirements and operational strategies for the river
- the environmental and social 'risks' of meeting, or not meeting, each particular requirement, since both ecological and social factors will be involved in prioritising these flow components.

eFlow Predictor iteratively works through the inputs and rules, comparing them to a series of programmed questions. For example:

- Has there already been a bankfull flow this year?

- What total time-span would meet these requirements for freshes?
- Is there enough water to provide an overbank flow this year?

As output, eFlow Predictor produces:

- details of an augmented flow regime that satisfies the environmental requirements, compared to existing and natural conditions
- a graph showing the daily water flow for the flow components
- summary statistics of volumetric water requirements.

From these outputs you can decide on the environmental benefits that each percentage allocation can achieve. You can review the data in discussion with colleagues, and argue your case in terms of megalitres.

eFlow Predictor is not a substitute for a detailed hydrological model, but it is a fast method of estimating the approximate amount of water it would take to benefit the river environment.

eFlow Predictor is part of
eWater's integrated modelling suite.



Partners

Griffith University, Monash University, CSIRO, Melbourne Water, Southern Rural Water, Dept of Sustainability and Environment (VIC), EPA Victoria, Department for Water (SA), SARDI.

Want to know more?

Go to our website at www.ewater.com.au

T: +61 2 6201 5168 E: contact@ewater.com.au

Photos: Cumbungi chowilla, Andrew Tatnell.
November 2010 © eWater