

Dramatic localised climate change effects on water resources

DAVID MUNDAY¹, IAN CORDERY² & DALE RUBINSTEIN¹

1 School of Civil and Environmental Engineering, University of NSW, Australia

2 School of Civil and Environmental Engineering, University of NSW, Sydney, NSW, 2052, Australia

i.cordery@unsw.edu.au

Abstract In the southwest of Western Australia the precipitation and resulting surface runoff have declined dramatically in recent years. The surface runoff around Perth is now only 30% of previous volumes; however, in the surrounding regions to the north and east the water resources have been increasing. Over the same period, temperatures have increased by up to 3°C over much of Australia; but in the southeast, where water resources changes are not apparent, the temperatures have declined by more than 0.5°C in the last 100 years. These findings demonstrate that the causes of these dramatic changes in precipitation, water resources and even temperature are quite unclear and vary greatly across Australia. They clearly show a need for caution in discussion of global climate change and for great care in the selection of representative observations to permit the drawing of conclusions on a global and even a regional scale.

Key words temperature rise; water resources decline; climate change