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REVIEW BY THE DIRECTOR OF METEOROLOGY

PERFORMANCE OVERVIEW

During 2006-07 the Bureau successfully met the challenges of providing meteorological and related services for the community, including for a number of significant events that occurred during the year. Despite the ending of the 2006 El Niño event and a general improvement in rainfall across Australia, longstanding drought conditions persisted in some areas with lower than average rainfall affecting much of eastern Australia and the west coast, while much of central and northern Australia experienced above average rainfall. Coupled with multi-year rainfall deficits and record high temperatures, this caused water supplies in the east and southwest of the continent to be severely stressed.

The announcement of the Government's National Plan for Water Security, which included an expanded role for the Bureau in water information, created a significant set of new tasks and issues for the Bureau. In addition to its existing flood warning and forecasting services, the Bureau gained responsibility for water resource assessment, accounting and prediction.

Questions about the sustainability of the Bureau's services into the future continued to shape strategic thinking and prompted detailed reconsiderations of the current and expected future demands for services and the implications for supporting structures and technologies. A broad aspirational study of ongoing service and infrastructure requirements was undertaken to aid the planning process and provide a strategic pathway for future development. The external Review of the Bureau of Meteorology was also commenced to report on the ability of the Bureau to sustainably fulfil its role as Australia's National Meteorological and Hydrological Service. Implementation of government-agreed recommendations arising from the Review will be pivotal to resolving current budget pressures.

Some other notable achievements included:

- progress towards the establishment of an Australian Tsunami Warning System, in collaboration with Geoscience Australia and Emergency Management Australia, including the first Australian deep ocean tsunami buoy deployed in the Southern Ocean southeast of Hobart;
- installation of new radar facilities at Warrego (east of Charleville), commissioning of a

Doppler radar at Mt Stapylton, near Brisbane, and installation of a similar high resolution radar for Melbourne, as well as implementation of Doppler capability for the Yarrowonga (Victoria) radar;

- an exchange of fire weather forecasters with the US National Weather Service and the US Bureau of Land Management to provide extra trained assistance at short notice during severe fire conditions;
- completion of the first phase of BLUElink, a joint Bureau of Meteorology, CSIRO and Royal Australian Navy (RAN) project to develop and implement a world-class ocean forecasting system for Australia;
- progress toward development, in conjunction with CSIRO, of a new generation earth system simulator for examining climate change issues – the Australian Community Climate and Earth System Simulator (ACCESS);
- development, within the ACCESS initiative, of a prototype numerical weather prediction model based on the UK Unified Model, with trial results showing major improvements over the current system;
- establishment of a new contract for the supply of advanced data acquisition systems for the network of some 600 automatic weather stations, as well as specially-configured sea level monitoring stations for new tsunami monitoring sites;
- commissioning of replacement Meteorological Offices at Willis Island and Charleville;
- progress toward development of a detailed Bureau Pandemic Management Plan;
- signing of a contract for the provision of advanced satellite reception systems for Victoria, the Northern Territory and Antarctica, and the first installation at Davis (Antarctica);
- signing of a new service agreement with Qantas Airways Ltd for the delivery of AMDAR (Aircraft Meteorological DATA Relay) meteorological observations made by the Qantas fleet;
- hosting of an international Cloud Seeding Research Symposium and establishment of an informal partnership to facilitate future research in ‘precipitation enhancement’;
- successful trialling of a revised version of the Predictive Ocean Atmosphere Model for Australia (POAMA) showing significant improvements in rainfall prediction skill;
- installation of the CP2 research radar near Ipswich, Queensland, and the commencement of operational testing; and
- the launch of the Water and the Land web site providing information for primary industry and natural resources management.

The Bureau reached and exceeded many of its performance targets identified in the 2006-07 Portfolio Budget Statements. However, while indicating continued maintenance of satisfactory performance levels, these targets do not convey the vulnerability of operations in the medium to longer term under present budget arrangements and with increasing demands for services. Further consideration will need to be given to realigning targets to reflect the Bureau’s real capacity to meet community expectations within agreed resource levels.

SIGNIFICANT ISSUES

Many challenges continued to face the Bureau of Meteorology in 2006-07, including:

- work toward creation of the Centre for Australian Weather and Climate Research, a joint research operation with CSIRO;
- managing the transition to an expanded role in water information established by the National Plan for Water Security;
- preparation for the acquisition of state-of-the-art forecasting tools to provide enhanced efficiency and effectiveness through automation of some manual forecasting tasks;
- establishment of a model for the sustainable delivery of services into the future;
- effective collaboration with Pacific Basin countries to maintain and enhance their weather and climate services for the mutual benefit of the region; and
- satisfaction of demands for new products and services to equitably and sustainably meet community needs.

FINANCIAL RESULTS

No new measures were provided through the 2006-07 Budget. The 2006-07 financial year finished with an operating surplus of \$7.469m. Some of the factors which contributed to the surplus included:

- increased gains from asset disposals;
- increased sales of goods and services;
- a reduction in the overall level of employee provisions (principally for long service leave), flowing on to reduced employee expenses; and
- lower than expected depreciation expense.

Further information on the financial performance of the Bureau of Meteorology is available in the financial statements, commencing on page 153 of this report.

OUTLOOK FOR 2007-08

The Bureau of Meteorology will continue to provide high quality weather and related forecasts and warnings to the Australian community as its highest priority. Associated with this there will be a number of on-going and new activities, including:

- implementation of the new role for the Bureau in water information set out by the National Plan for Water Security;
- upgrade and installation of equipment for the Australian Baseline Sea Level network, as part of the Australian Tsunami Warning System, in collaboration with Emergency Management Australia and Geoscience Australia;
- installation of replacement radars at Gympie, Bairnsdale, Perth and Darwin Airport, as

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well as a high resolution Doppler radar at Sydney and a new Doppler radar at Tamworth, New South Wales;

- continuation of the Bureau's enhanced field office replacement program, including commissioning of replacement offices at Broome and Esperance in Western Australia;
- development of equipment and systems for the next generation of automatic weather stations;
- implementation of agreed recommendations arising from the Review of the Bureau of Meteorology;
- commissioning of new equipment e.g. radars, automatic weather stations, wind profilers and new generation satellite reception facilities;
- implementation of further efficiencies in Bureau programs to enable improved products and services to be delivered with fewer staff;
- continued involvement in the ACCESS with CSIRO, the Australian Greenhouse Office and scientists from other academic institutions;
- establishment of the Centre for Australian Weather and Climate Research in partnership with CSIRO; and
- contributions to the implementation of disaster mitigation strategies.