

Healthy Environment Strategies for Christchurch & Banks Peninsula



UDS Forum
13 October 2008

CCC Healthy Environment Programme

- CCC Healthy Environment strategies a basis for UDS actions & cross-boundary work e.g.
 - develop a cross-boundary water supply strategy (CCC, 6.23.4.1)
 - identify, protect & create biodiversity sites as part of growth areas (SDC, WDC, CCC, 6.11.4.5)
 - initiate a co-ordinated approach to the provision of regional strategic open space incl. a regional park network (ECan, 6.5.3.2)
 - align stormwater discharges & treatment with the operative NRRP (SDC, 6.21.4.1-5)
 - planning for Natural Hazards and Climate Change (UDS Implementation Committee, 6.15.4.1-4)



Water Supply Strategy

Christchurch/Ōtautahi and Banks Peninsula/Te Pātaka o Rākaihautū



CCC Water Supply Strategy - Background

Key objective for strategy:

- Sustainable management of the Christchurch and Banks Peninsula public drinking water supply now and into the future



Key challenges for water supply planning

- finite resource
- growing City
- high per capita use
- lack of incentives to use water efficiently
- alternative sources limited & costly
- water quality impacted by land use
- service standards vary



Issue: Availability

- **Bucket analogy: Water resources are limited, not a bottomless bucket**
- **Possible cap under PNRRP: 75 million m³/year for CCC drinking water supply**
 - Health of surface water linked to adequate aquifer levels
- **Seasonal variability of surface water sources (e.g., Takamatua Stream in Akaroa Harbour)**
- **Effects of climate change, sea level rise**

Issue: Water quality

- Risk of contamination of groundwater and surface water sources from
 - Land use activities
 - Backflow
 - Saltwater intrusion
- Risk of contamination post-abstraction from
 - Asset condition
- Potential from “non-secure” source (MoH grading scheme)

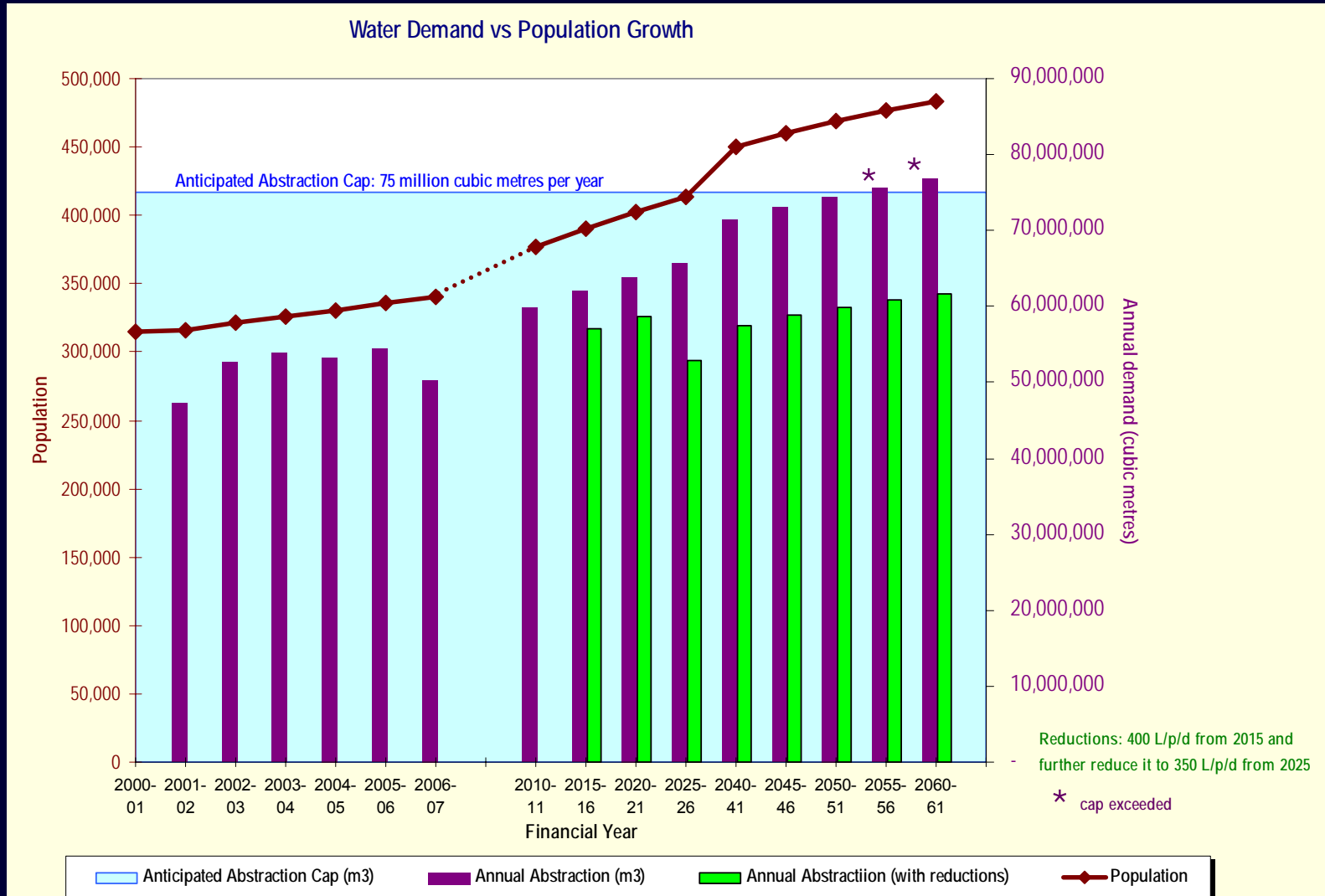


Issue: Demand and use

- Relatively high per capita use compared to other cities
- Population growth (UDS: 120,000 more by 2041)
- Drinking water used for all types of water uses
- Impact of additional customers coming from private suppliers

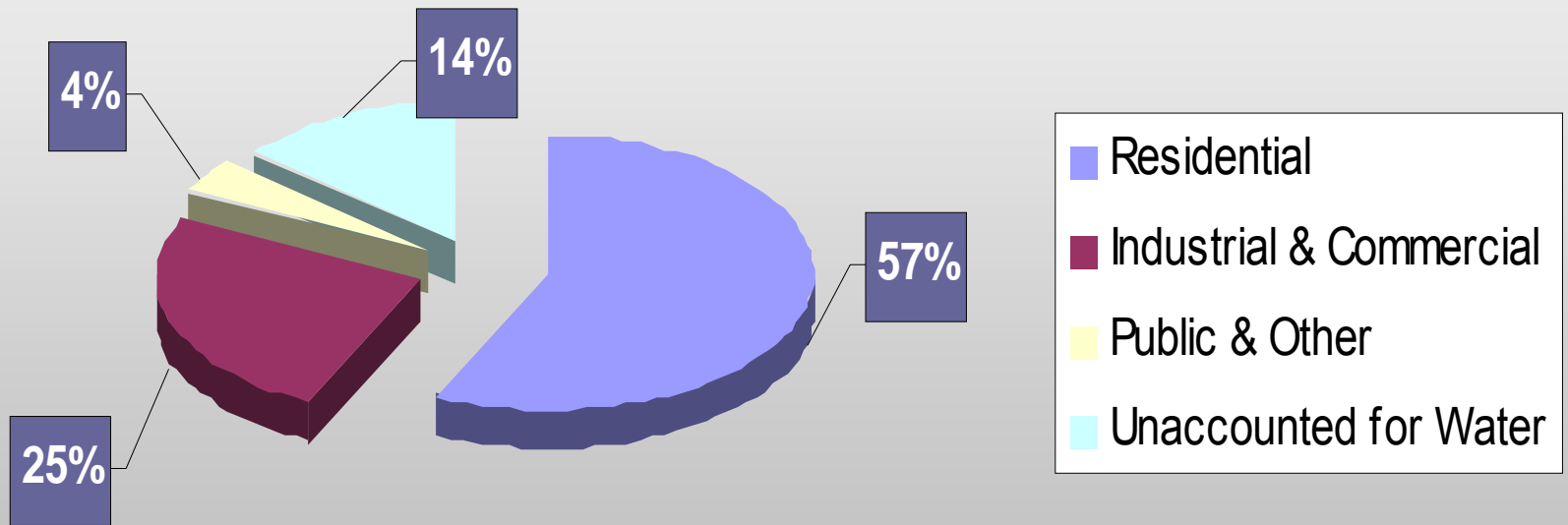


Availability and Demand



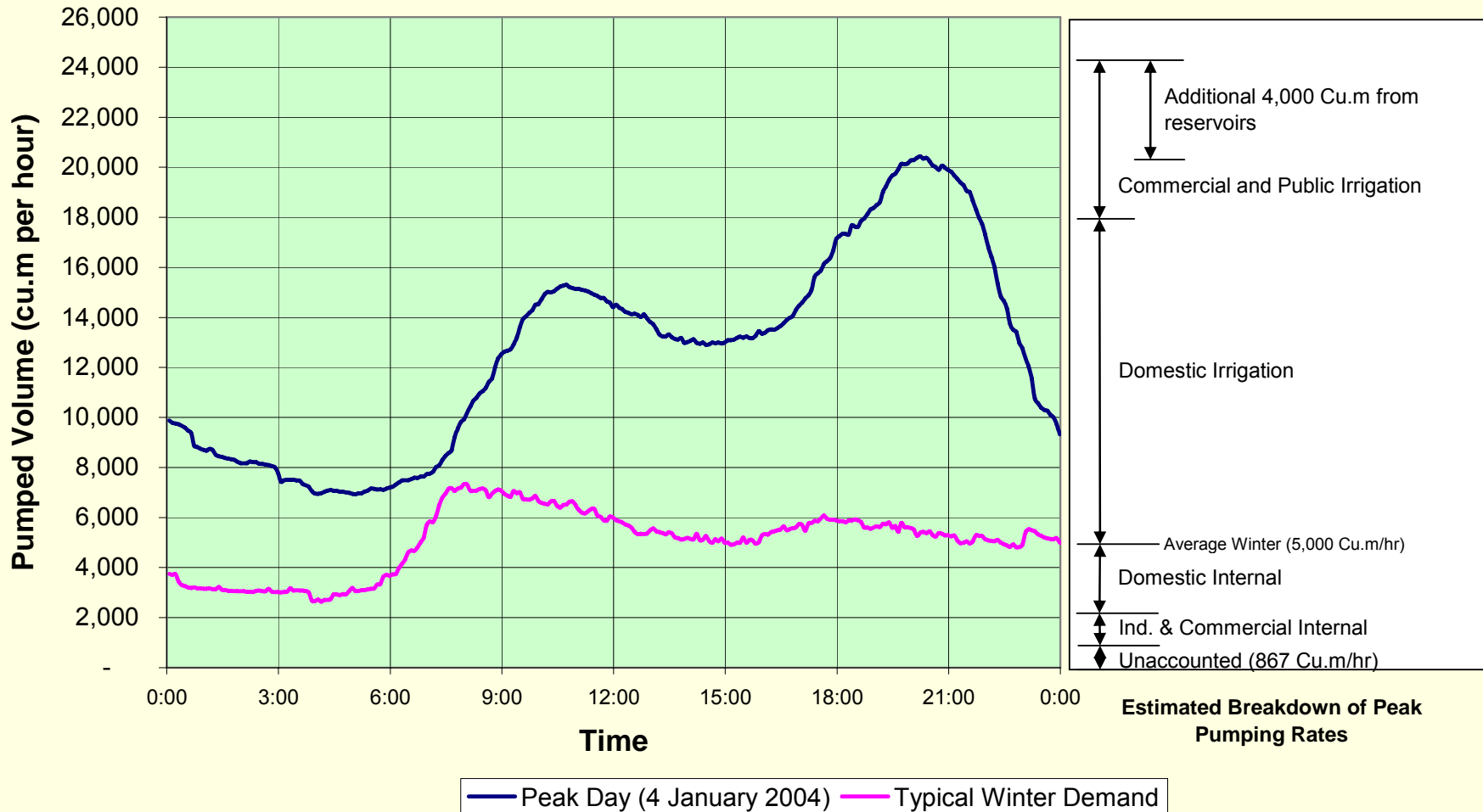
Who uses the water

Demand per Category



Christchurch "The Garden City"

Peak Summer Compared to Average Winter Day



Issue: Service, costs, regulations

- Variable service standards within Christchurch and between urban and rural areas
- Water in Christchurch is relatively inexpensive (\$0.50/m³)
- Strict regulatory environment subject to change
- Changing fire protection requirements



Options

Highly ranked options:

- Pressure zone management to optimise equalised pressure management zones
- Fencing of surface water sources
- Water-efficient devices for City Housing
- Valuing water campaign
- Securing rights to additional water takes
- Alternative sources – Waimakariri, Ellesmere



Options

Highly ranked options:

- Rainwater systems
 - Council rainwater use
 - Incentive programme
- Tertiary treated wastewater re-use demonstration project at Bromley
- Acquiring private well consents
- North West Zone – UV treatment / deeper wells



Options

Medium ranked options:

- Enhanced water loss reduction programme – including cost/benefit study
- Comprehensive economic & legal review of water charging approach
- Water efficient devices initiatives
- Green Plumber/Green Gardener programmes



Where to from here

- **Key stakeholder meetings**
- **Draft strategy to Council - Nov 08**
- **Public consultation – end of 2008/early 2009**
- **Preparation of final report and strategy for Council consideration - 2009**

