



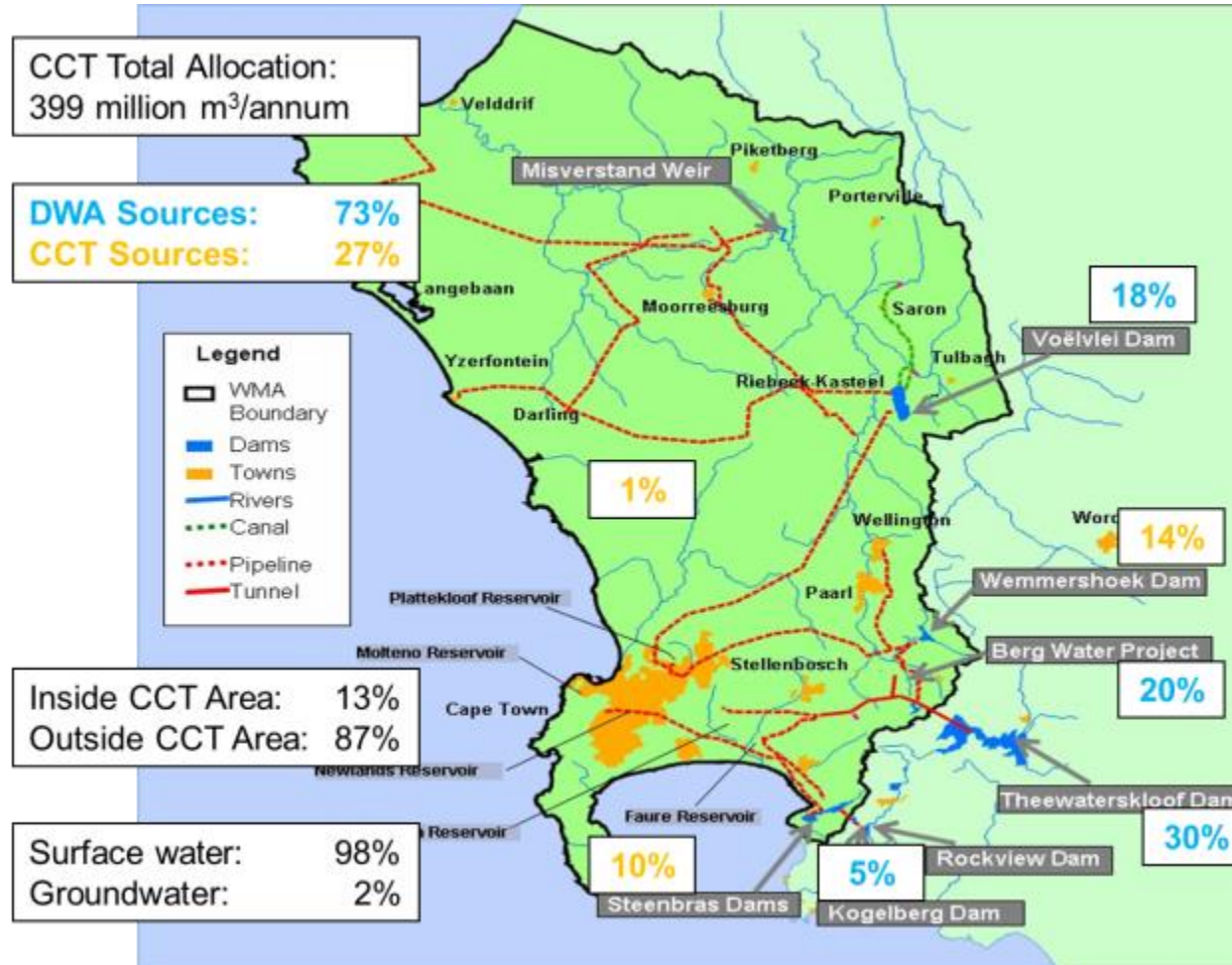
CITY OF CAPE TOWN
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CITY OF CAPE TOWN: WATER RESOURCE PLANNING AND WATER DEMAND MANAGEMENT

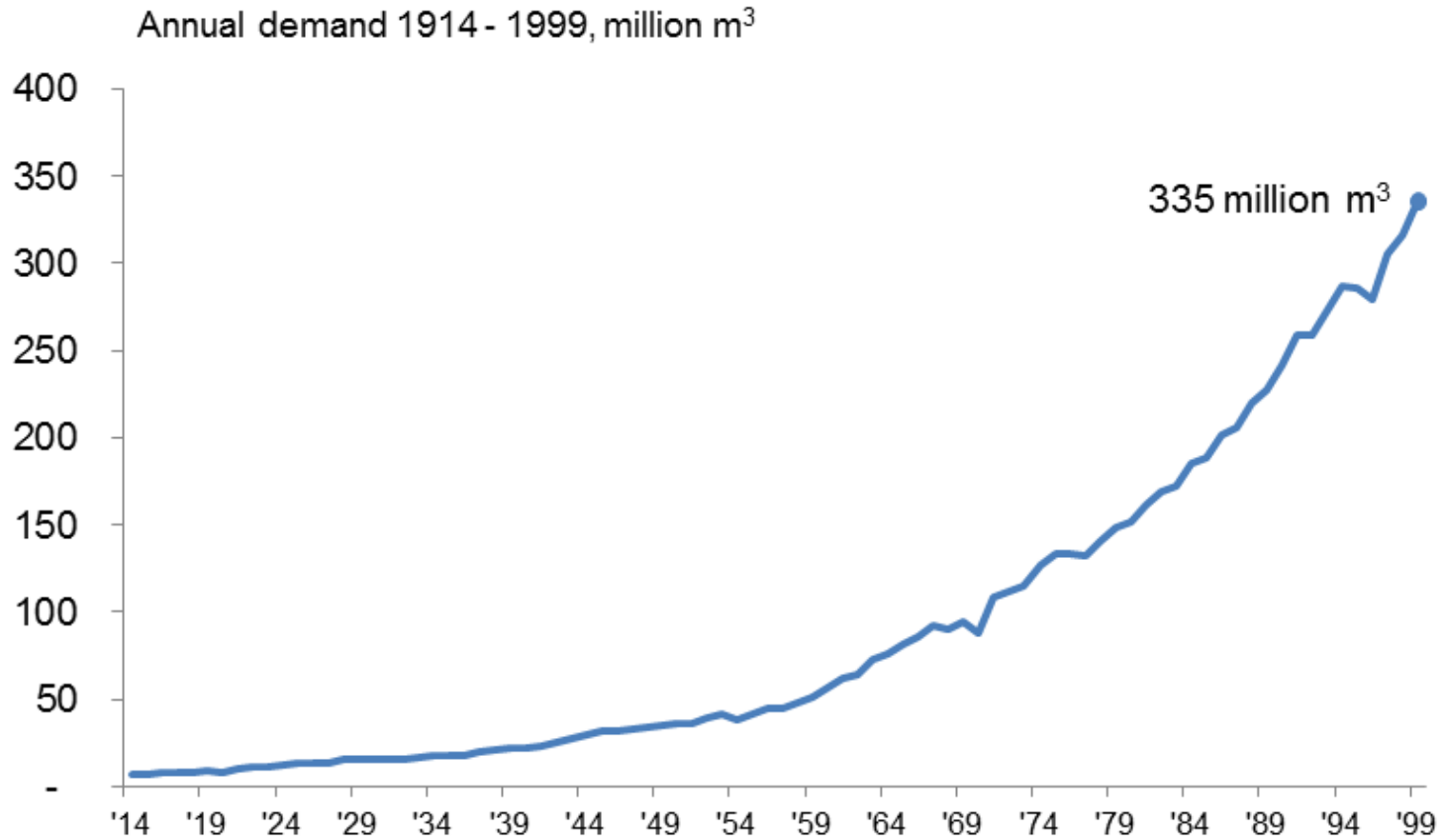
Presentation to the 5th Regional African Water Leakage Summit/ 22 - 23 June 2015

Making progress possible. **Together.**

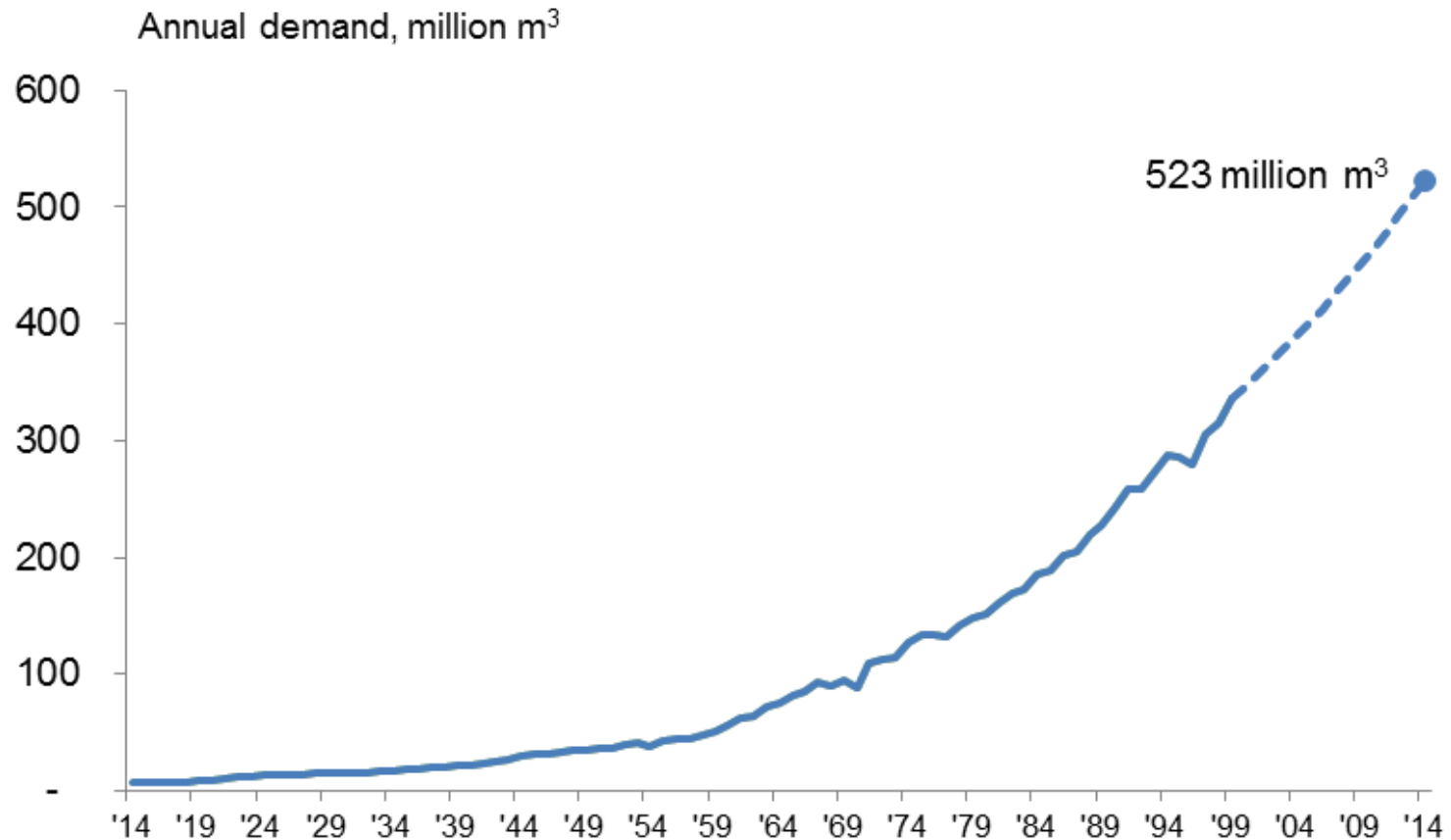
Where does Cape Town get its water from?



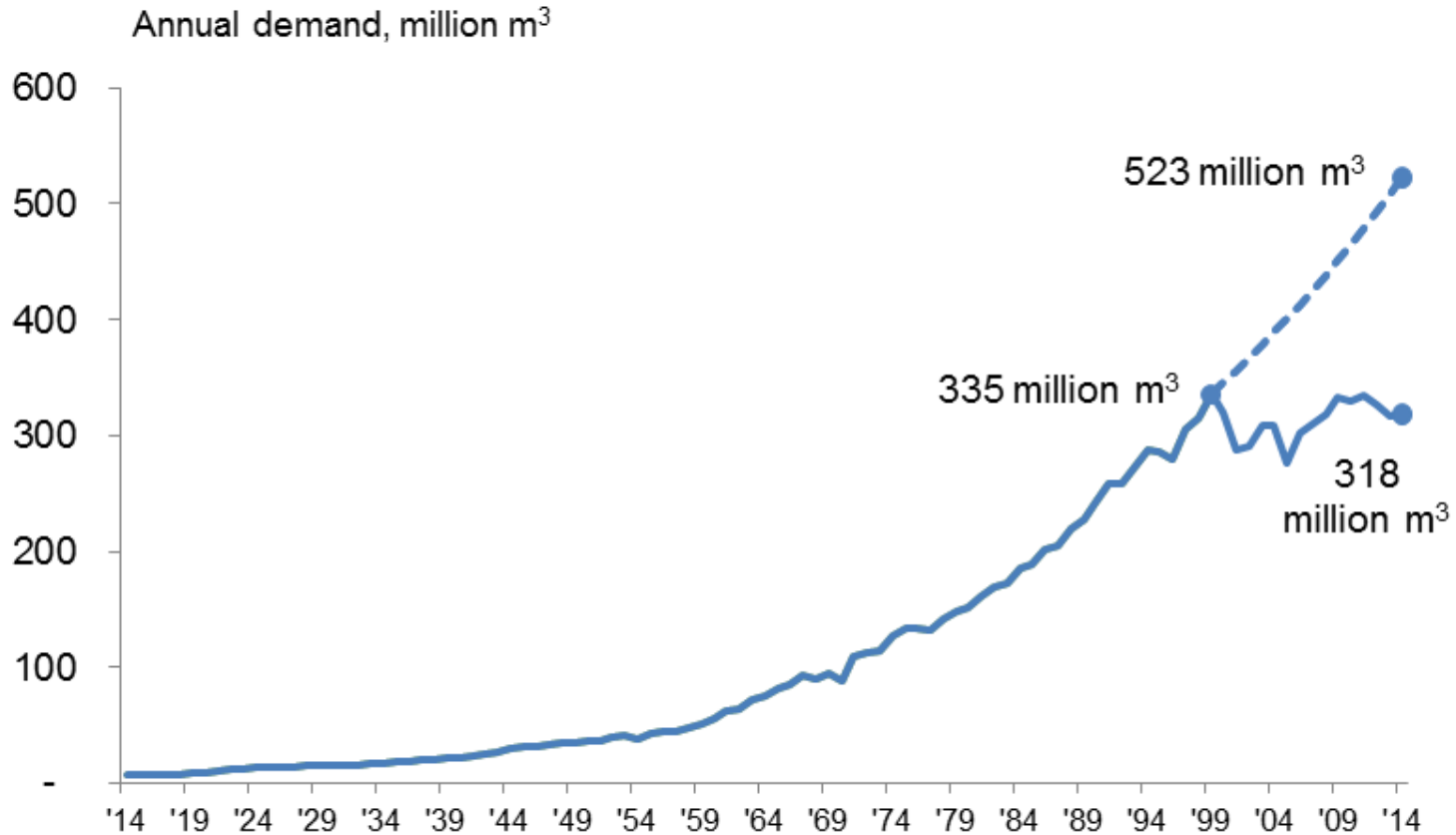
Cape Town's water demand grew at 4% per annum on average from 1914 to 1999



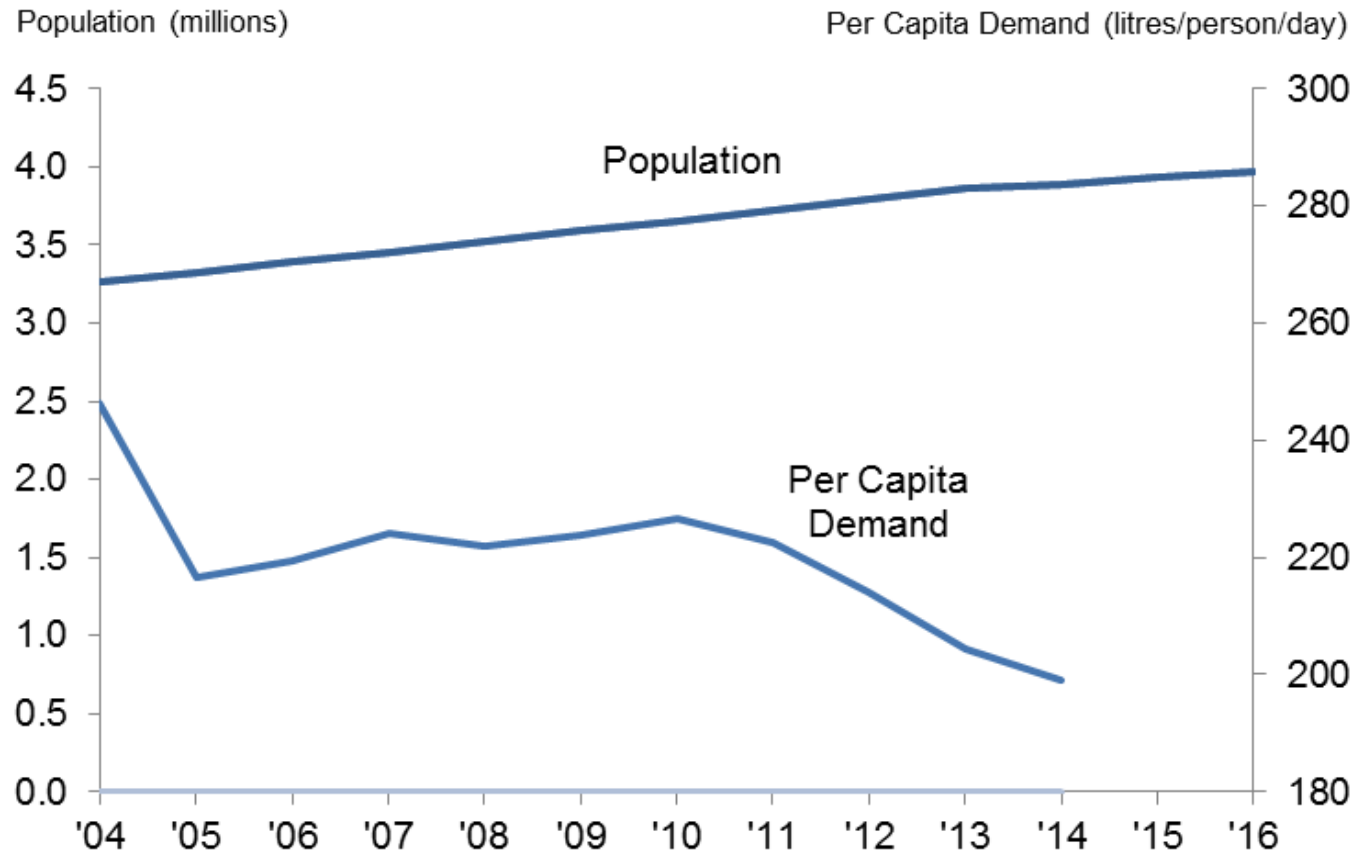
Projected unconstrained growth between 1999 and 2014



Actual demand growth 1999 - 2014



Population increase and per capita demand decrease



Factors that influenced demand growth after 2000

Water restrictions in 2000/01 and 2004/05

Water restrictions were implemented in 2000/01 and 2004/05, after periods of low winter rainfall.

The City commits to implementing WDM as part of approval of Berg River Scheme

The raw water supply agreement between the City and DWS was signed in 2003, for the construction of the Berg River Scheme. One of the conditions of approval of the Scheme was that the City would implement water demand management.

The City approves and implements a 10 year WDM Strategy

The City approved its 10 year water demand management strategy in 2007. A dedicated water demand management section was established in the City's water and sanitation department, responsible for implementing the strategy.

Berg River Scheme completed

The construction of the Berg River Scheme was completed in 2007.

Water demand management interventions

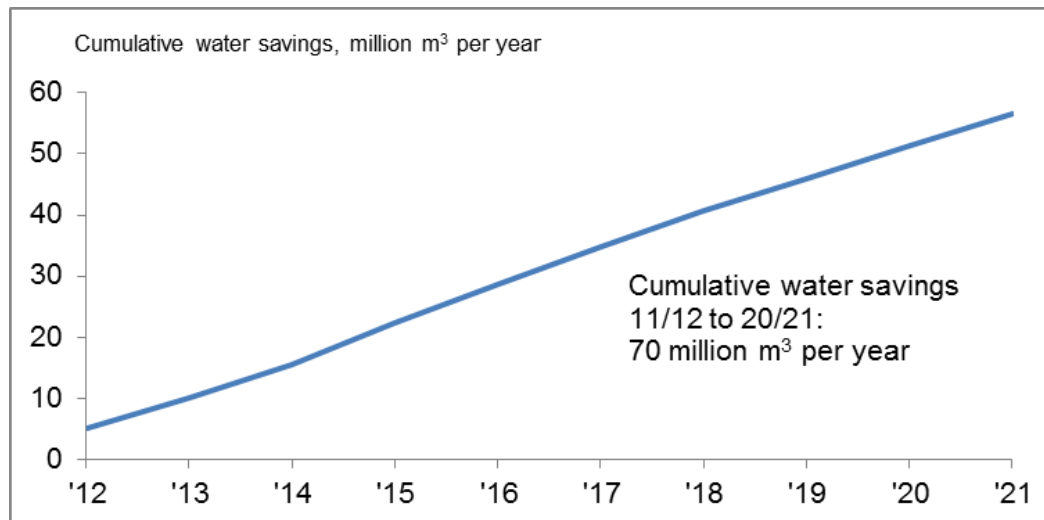
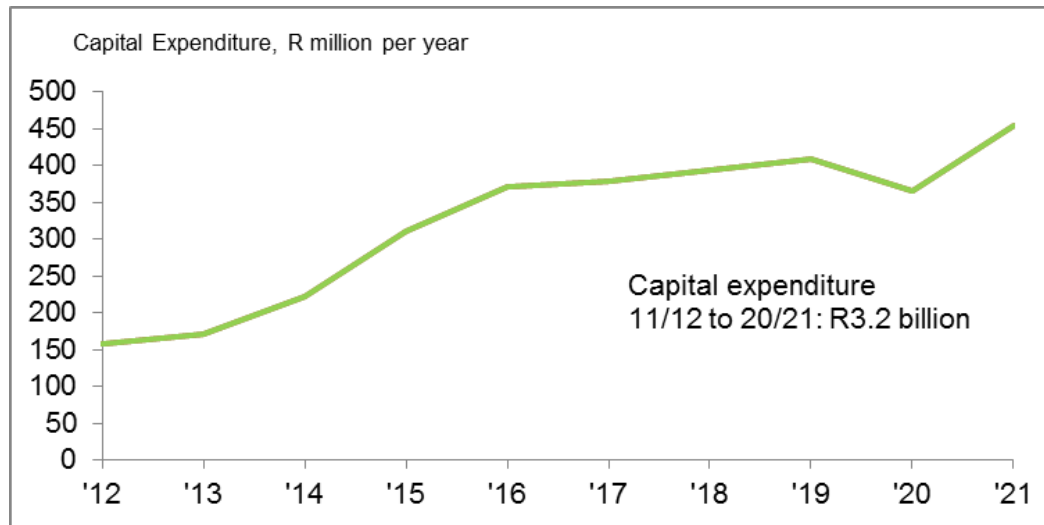
Technical interventions:

- Pressure management
- Treated effluent use
- Water pipe replacement
- Leak detection
- Water management devices
- Meter replacement
- Zone metering
- Building plumbing retrofit
- Springs investigation

Education and awareness campaigns:

- Door to door community engagements
- Schools interventions
- Top water users engagements

Water demand management programme 2011/12 to 2020/21: capital expenditure of R3.2b and water savings of 70 million m³ per annum



Future water supply schemes being considered: Voëlvlei Augmentation, TMG Aquifer, Desalination and Water Reclamation

Voëlvlei augmentation scheme (phase 1)

Phase 1
35 Mm³/a



Water reclamation for potable use

Possible
110MI/d
~40 Mm³/a



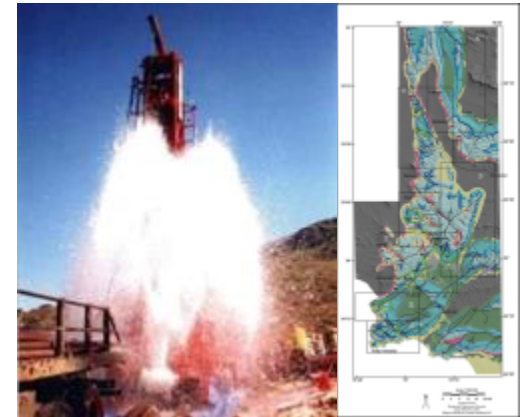
Sea water desalination

Up to
450MI/d
~160 Mm³/a

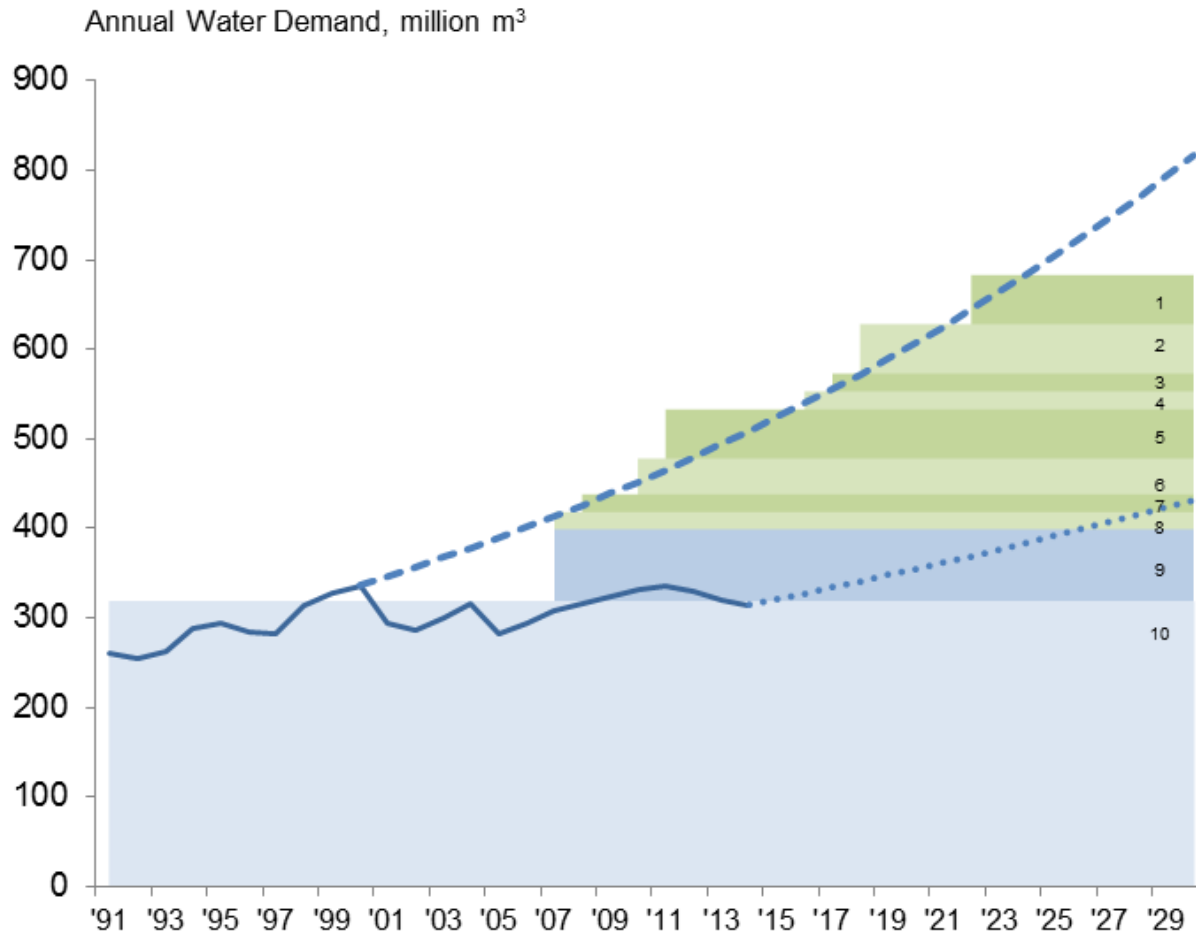


Table Mountain Group Aquifer

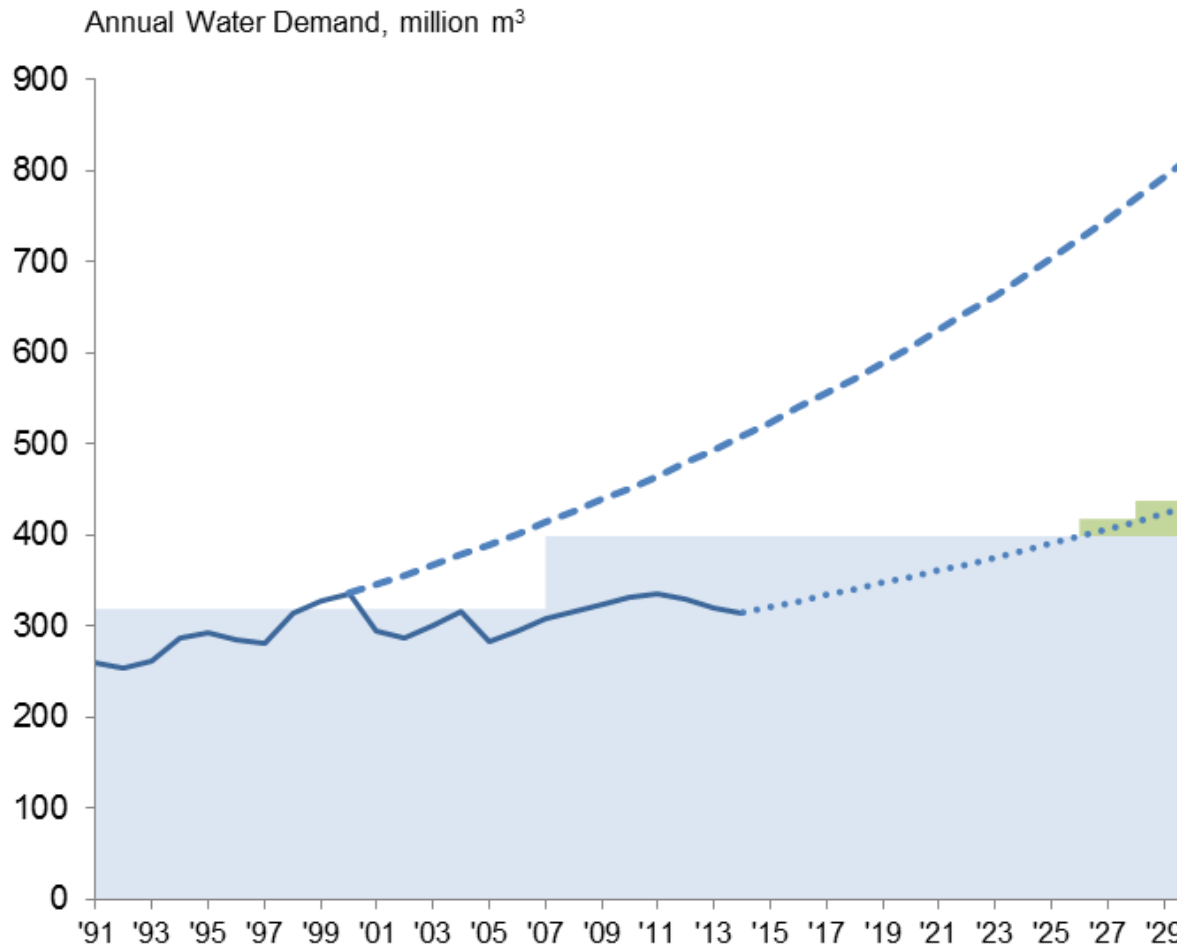
Possible
40 Mm³/a



Significant water resource expansion programme was required to supply unconstrained growth



Significant delay in water resource programme due to actual demand growth from 1999 to 2014



Impact of water demand management on water resource planning: deferring of programme and cost

Deferring water resource expansion programme

The programme to implement various phases of four new water supply schemes has been deferred by around 15 years.

Deferring capital expenditure

A capital expenditure programme of around R15 – R20 billion over 15 – 20 years has been deferred by around 15 years.

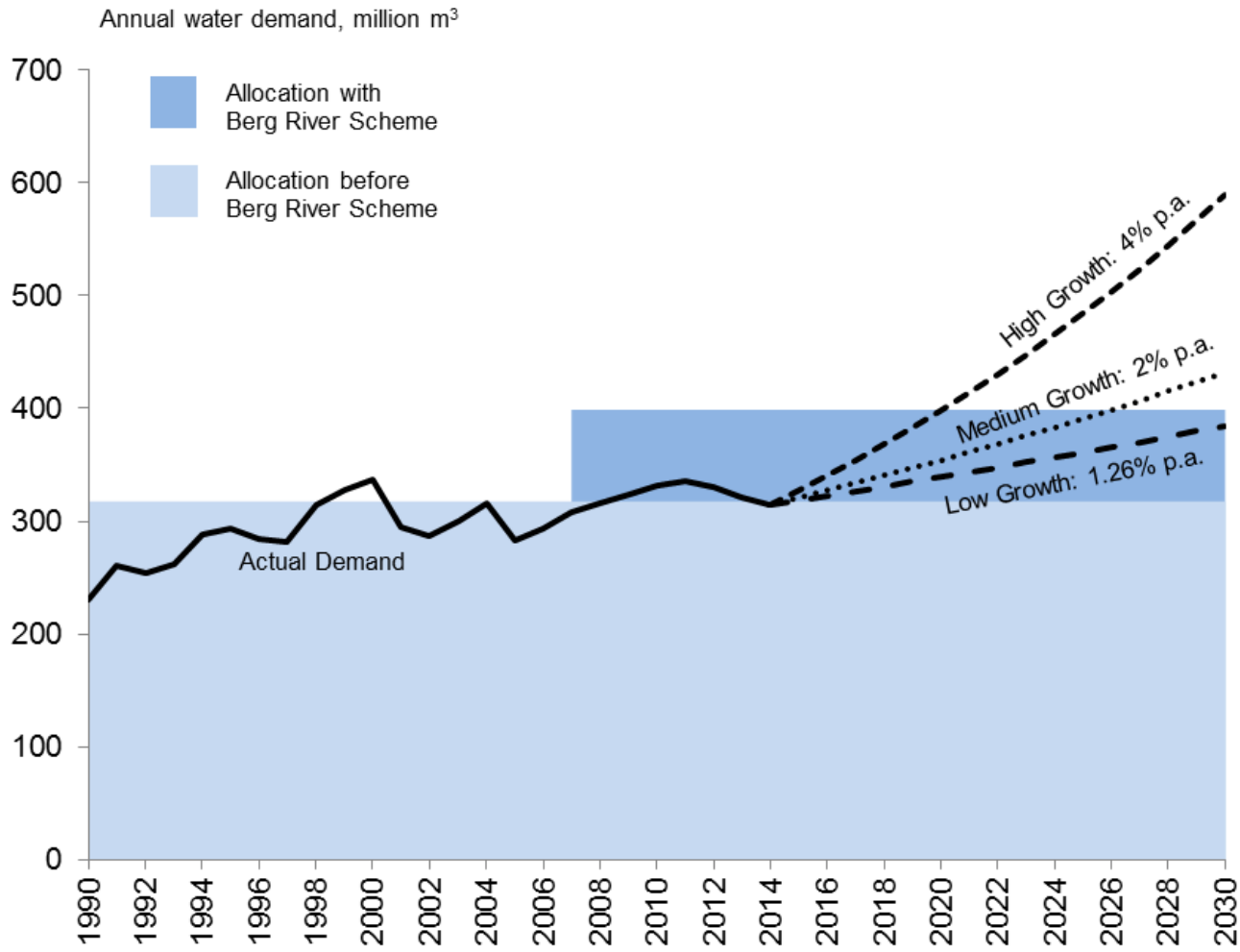
Lowering demand growth

With the impact of water demand management, demand growth should be at a lower annual percentage.

Using existing supplies more effectively

The per capita demand in Cape Town has decreased; existing supplies can be utilised more effectively.

Challenge: difficult to predict future demand growth and when to “press go” on implementing the next water resource scheme





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Thank You

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Making progress possible. Together.