

STELLENBOSCH MUNICIPALITY



Main insights

- Water may significantly constrain Stellenbosch Municipality's (SM) future development due to high urban growth and the high concentration of high-value irrigated crops. By 2040, SM's water deficit could cost R10.3 billion per year, 77% of the current economy, and 56,602 jobs per year, 87% of current employment.
- In the absence of significant new supply options, and with 96% growth in urban water requirements by 2040, SM should decouple population growth and water consumption through water conservation and demand measures.

POPULATION

173 419

in 2016

2.2%

(Population Growth 2011-2016)

GDP & EMPLOYMENT

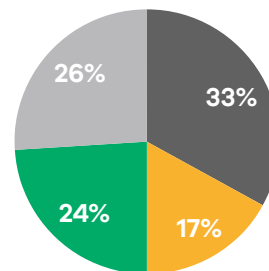
4.8%

GDP growth rate, 2005-2013

1.8%

employment growth rate, 2005-2013

LARGEST 3 SECTORS (2013)

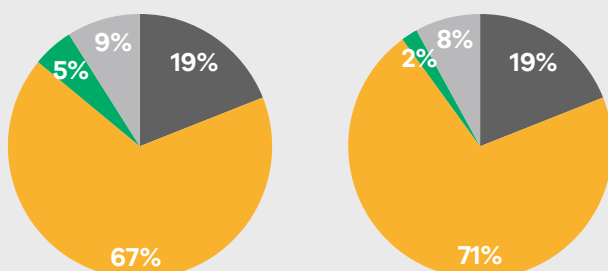


- Finance, Insurance and Business Services
- Manufacturing
- Wholesale and Retail Trade, Catering and Accommodation Services
- Other

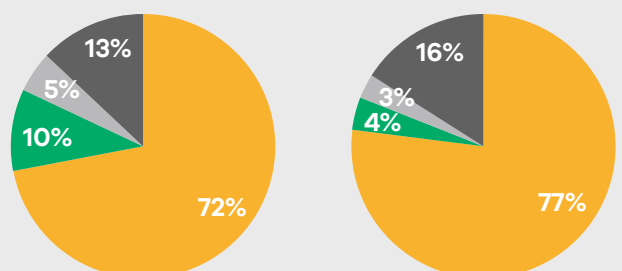
What is the water intensity of the Stellenbosch economy?

Water intensity is the volumes of water used per unit of value added to the economy, with some economic sectors using more water than others to produce goods and services of the same value. Stellenbosch has a low percentage of heavily water intense sectors. However, of the heavily and moderately water intense sectors, agriculture, agri-processing, transport and construction make significant contributions to local Gross Value Add (GVA) and employment. The municipality has a large concentration of high-value irrigated crops, which correlates with high water usage. Grapes consume 88% of all irrigated water in the municipality. Stellenbosch, Drakenstein and Swartland are the highest irrigated water users in the region.

GVA by water intensity of sectors



Employment by water intensity of sectors

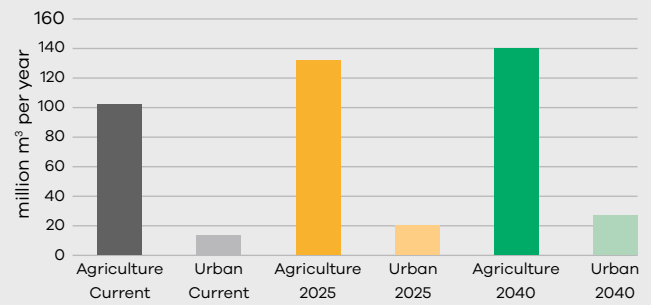


How will water demand change in the future?

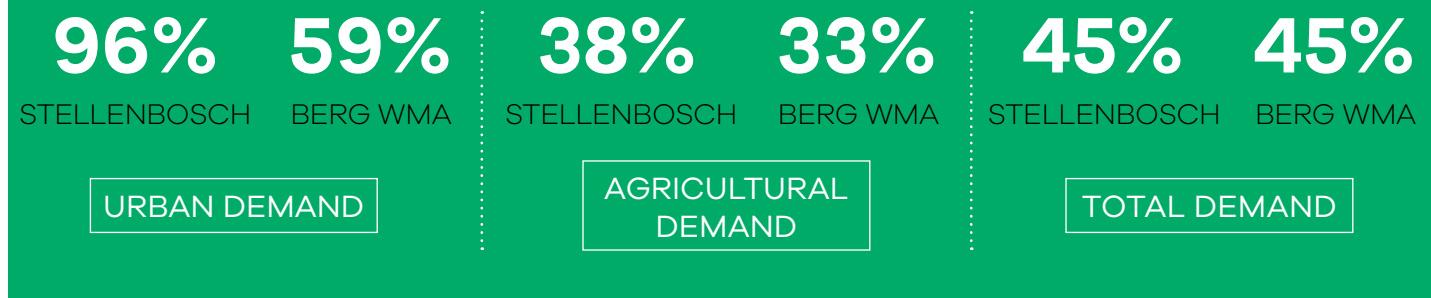
Climate change will likely increase SM's agricultural water requirements by 38% between 2015 and 2040. By 2040, grapes and stone fruit water requirements may increase by 34% and 29%, respectively. Stellenbosch, Drakenstein and Swartland will continue to require the largest volume of irrigated water in the Berg WMA in 2025 and 2040, primarily driven by wine grape industry.

SM's population growth is amongst the highest in the region at 2.2%, resulting in one of the highest urban water demand increases by 2040 at 96%.

Irrigated agriculture and urban water requirements per year



What is the expected growth in water demand by 2040?

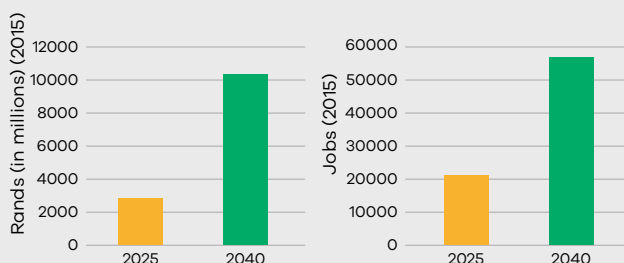


How much will the future supply deficit cost Stellenbosch?

SM's total water supply deficit is estimated to be 32.8 million m³ per year by 2025, 23% of the Berg WMA's entire water deficit. By 2040, the water deficit may increase to ~48.7 million m³ per year, 15% of the Berg WMA's entire water deficit. SM, Drakenstein and Swartland are predicted to be significant contributors to the regional deficit. Constraints on water supply will have significant

economic impacts with significant costs to GVA and employment originating from the opportunity costs of both the agriculture and urban water deficit. By 2040, the water deficit may cost the local economy ~R10.3 billion per year, 77% of the current size of the local economy, and 56 602 jobs annually, 87% of the current size of local employment.

Value of water supply deficit



GVA deficit

	STELLENBOSCH	BERG WMA
2025	22%	33%
2040	77%	7%

Employment deficit

	STELLENBOSCH	BERG WMA
2025	32%	7%
2040	87%	38%

For more information and support, call GreenCape's water team on 021 811 0250 or email water@greencape.co.za



This municipal snapshot is the result of a broader study and can be read in conjunction with the policy brief; A case for integration: water resource and development planning in the Berg Water Management Area which was funded by the Water Research Commission and The Western Cape Government's Department of Economic Development and Tourism. The policy brief is freely available here: <https://www.greencape.co.za/content/focusarea/water-for-sustainable-development>