Distell - Water use efficiency
25 March 2019

Who & Where is Distell?

Distell was created in 2000 by the merger of Stellenbosch Farmers' Winery (SFW) and Distillers Corporation.

- Distell is Africa's leading producer and marketer of spirits, fine wines, ciders and ready-to-drinks
- Distell is currently the 2nd largest Cider Producer in the world
- Over 5,000 employees

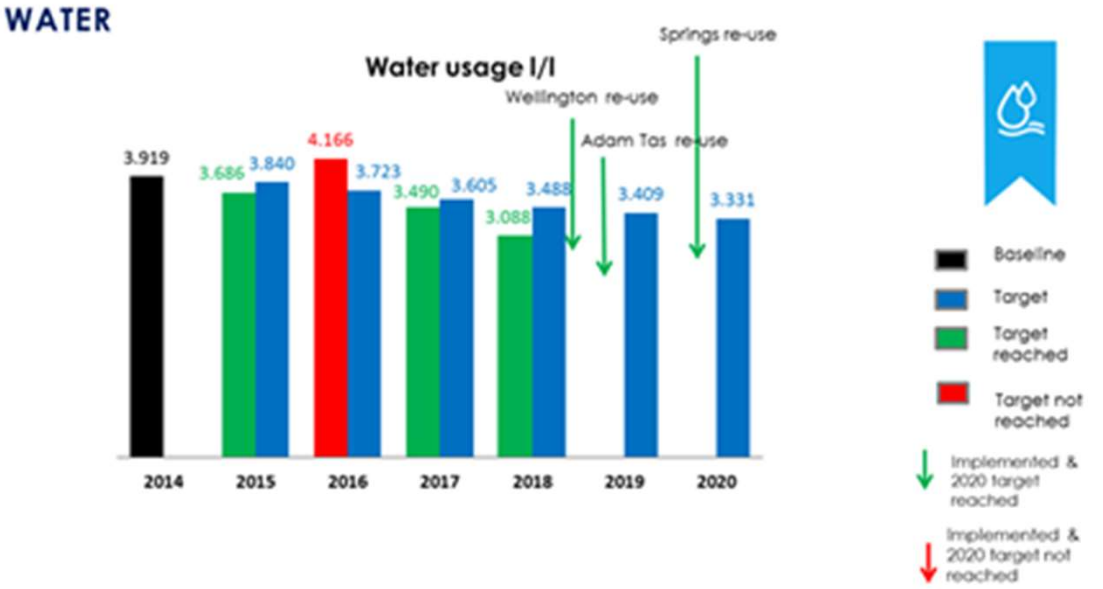
<u>South Africa</u>

- 16 production facilities
- 12 Western Cape based

South Africa - Water use efficiency – history

- Water use efficiency action initiated in 2010 – water use in 2009 was 4.2l/l
- Water usage in end FY 2014 3.9 l/l
- Target set to reduce by 15% by 2020 from 2014 – 3.3 l/l
- At end of **FY 2018 exceeded 2020 target** - usage was **3.1 l/l. 25% reduction** from 2009

Water use efficiency (in factory)



Water use reduction actions

Monitoring and measurement

- Implemented improved monitoring and reporting systems in 2010
- Included water network analysis and sub-metering

Larger water use reduction projects and water audits

- 2013: Springs pasteuriser water recycling
- 2015: Adam Tas & Greenpark – water reduction projects
    - Spring – recycling of RO brine & Bottle rinse water
- 2016: Adam Tas bottle rinse water recycling

  Water audits completed – Adam Tas, Goudini & Wellington
- 2017: Adam Tas cellar water reductions via low flow systems
    - Water audits completed – Wadeville, Springs & Greenpark

Water use reduction

Larger water use reduction projects and water audits - continue

- 2017: Undertook water risk assessment in collaboration with WWF, using the international Water Risk Filter model

- 2018: Greenpark – RO bring recycling, Arkal filter back wash recycling, Pasteuriser water recycling
    - Temporary relocating some production activities to sites outside Western Cape
    - Closed loop cooling system installed at Wellington
    - Awareness program for office water use
    - Water audits completed – Monis & Port Elizabeth
- 2019: Port Elizabeth – Replace bottle old washers
    - Adam Tas move from tunnel to flash pasteurisers

Water reduction Western Cape sites – drought 2018

DISTELL

Distell Western Cape - Water Consumption

Update :	Dec-18	Pre-drought (2010-2015) Avg Water Use [kL]		Past year Use [kL] Period: Jan-18 to Dec-18			Past Semester Use [kL] vs corresponding semester in 2015		
Site	Municipal Area	Annual	Monthly	Annual	Monthly	Saving %	Jul-Dec 2015	Jul-Dec 2018	Saving %
Epping - Green Park	City of Cape Town	351 926	29 327	203 420	16 952	42.2%	165 139	110 236	33.2%
Durbanville Hills	City of Cape Town	15 674	1 306	13 657	1 138	12.9%	6 829	7 827	-14.6%
City of Cape Town Municipal Supply		367 600	30 633	217 077	18 090	40.9%	171 968	118 063	31.3%
Adam Tas	Stellenbosch	168 750	14 063	136 275	11 356	19.2%	89 910	74 250	17.4%
Bergkelder	Stellenbosch	91 138	7 595	38 653	3 221	57.6%	49 752	23 726	52.3%
Van Ryn	Stellenbosch	19 345	1 612	5 091	424	73.7%	8 855	2 409	72.8%
Stellenbosch Municipal Supply		279 233	23 269	180 019	15 002	35.5%	148 517	100 385	32.4%
Paarl -Monis	Drakenstein	317 621	26 468	104 499	8 708	67.1%	208 659	52 613	74.8%
Wellington	Drakenstein	21 540	1 795	23 626	1 969	-9.7%	8 788	10 511	-19.6%
Nederburg	Drakenstein	8 917	743	13 326	1 111	-49.4%	147	2 815	-1815.0%
Drakenstein Municipal Supply		348 078	29 007	141 451	11 788	59.4%	217 594	65 939	69.7%
Worcester	Breede Valley	56 862	4 739	58 406	4 867	-2.7%	20 110	19 184	4.6%
Robertson	Langeberg	5 325	444	267	22	95.0%	1 914	95	95.1%
Western Cape Municipal Supply		1 057 098	88 091	597 220	49 768	43.5%	560 103	303 666	45.8%
Bergkelder	Bergkelder borehole		-		-				
Durbanville Hills	JC le Roux borehole	-	-	-	-				
Nederburg	Nederburg borehole	83 825	6 985	62 354	5 196	25.6%	28 855	25 684	11.0%
JC le Roux	JC le Roux borehole	44 027	3 669	17 064	1 422	61.2%	16 909	8 373	50.5%
Goudini	Goudini borehole	118 946	9 912	104 261	8 688	12.3%	52 036	49 327	5.2%
Estate Farms	Farm Boreholes	10 584	882	4 124	344	61.0%	1 060	574	45.9%
Western Cape Ground water supply		257 383	21 449	187 803	15 650	27.0%	98 860	83 958	15.1%
Wellington	Berg River	66 438	5 537	28 878	2 407	56.5%	38 267	26 016	32.0%
Western Cape surface water supply		66 438	5 537	28 878	2 407	56.5%	38 267	26 016	32.0%
Total Western Cape Usage		1 380 919	115 077	813 900	67 825	41.1%	697 230	413 640	40.7%

* Reference is corresponding period in 2015

- Overall reduction in water use at all Western Cape sites for 2018 against 2015 base year was 41.1% and for FY19 YTD 40.7%.

- For FY19 YTD we reached the required 45% from Municipal supply.

Alternative water supply

- Drought in Western Cape added momentum to actions to reduce water use and identify alternative water sources,
  - Drilling of boreholes, safe yield and quality assessment and application for water use licences and water treatment facilities
  - Water reclamation from waste water following anaerobic, aerobic, ultra-filtration and reverse osmosis treatment of our industrial waste water - utilities and washing - no blending of final product
  - Construction of waste water reclamation plants for Springs, Adam Tas & Wellington completed
  - Principle agreement for future waste water reclamation plants at Worcester, Wadeville, Monis and Port Elizabeth

Manufacturing: Water Continuity Plans

DISTELL

Goudini
360 m³/d

New additional borehole - Yield very good (385m³/d) WUL awaited to increase abstraction

100% self sufficient with potential surplus water – safe yield assessment – completed on both boreholes

WUL awaited

220 m³/d

Wellington
380 m³/d

New borehole - Dry boreholes!

Waste water reclamation plant 300m³/d operational

No indication from Drakenstein Municipality of water supply interruptions (only 15% of demand)

Worcester
225 m³/d

New borehole - Yield 43m³/d but quality saline

Waste water reclamation plant planned mid 2020

No indication from Breede Valley Municipality of water supply interruptions (local dams are full)

Port Elizabeth
490m³/d

3 existing boreholes – Yield 290 m³/d but water very saline

Waste water reclamation plant scoping complete Bottle washer replacements in March 2019

Drought area - No restrictions in industrial use.

Plaisir de Merle, Alto & Uitkyk – 100% self sufficient on Ground water

Nederburg
210 m³/d

New municipal pipeline complete

Additional borehole investigation started – delayed due to security issues

No indication from Drakenstein Municipality of water supply interruptions

Monis
330 m³/d

New borehole – 50m³/d Treatment plant operational – WUL awaited

No indication from Drakenstein Municipality of water supply interruptions

D'ville Hills
60 m³/d

New borehole - Dry borehole

Cape Town – Water restrictions lifted

WUL awaited

60 m³/d

JC le Roux
62 m³/d

100% self sufficient with surplus

Bergkelder borehole 400m³/d (35m³/d local use) - Treatment plant operational

365 m³/d

Greenpark
730 m³/d

Cape Town – Water restrictions lifted

New boreholes - Yield 170m³/d but water very saline - WUL awaited

WUL awaited

Adam Tas
430 m³/d

New boreholes - Yield 100m³/d - Treatment plant operational – WUL awaited

Waste water reclamation plant complete but not operational

No indication from Stellenbosch Municipality of water supply interruptions

Van Ryn
25 m³/d

No indication from Stellenbosch Municipality of water supply interruptions

Water demand

- Existing Borehole
- Planned Borehole
- Borehole not viable
- Municipal water
- Recycled waste water

Water supply risk considering remedial actions:

- Low risk
- Medium risk
- High risk