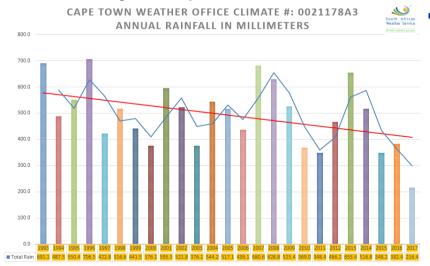


## Annual Rainfall figures for Cape Town Weather Office: 1993 till current.

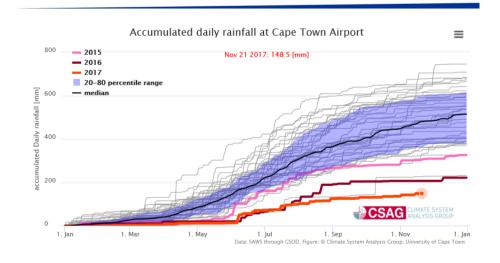


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## World Economic Forum 2017 Global Risk Report

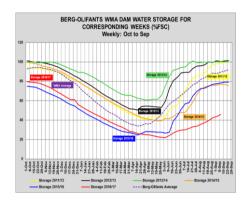
	2007	2012	2017
	Breakdown of critical Information Infrastructure	Severe income disparity	Extreme weather events
	Chronic disease in developed countires	Chronic fiscal imbalances	Large-scale involuntary migration
	Oil price shock	Rising greenhouse gas emissions	Major natural disasters
		Cyber attacks	
	China economic hard landing	Water supply crises	Massive incident of data fraud/theft
			Trado triott
	obal Risks in Terms of Impact		nado non
ob	al Risks in Terms of Impact 2007	2012	2017
ob		2012 Major systemic financial failure	
ob	2007		2017
ot	2007 Asset price collapse	Major systemic financial failure	2017 Weapons of mass destruction
0	Asset price collapse  Retrenchment from globalization	Major systemic financial failure  Water supply crises	2017 Weapons of mass destruction Extreme weather events

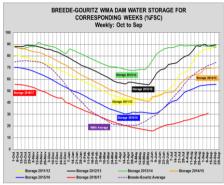


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## Water storage levels critically low in all catchments

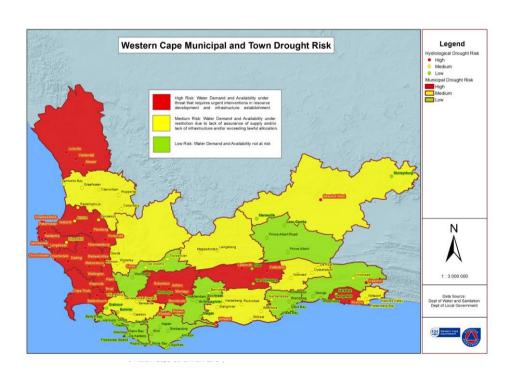


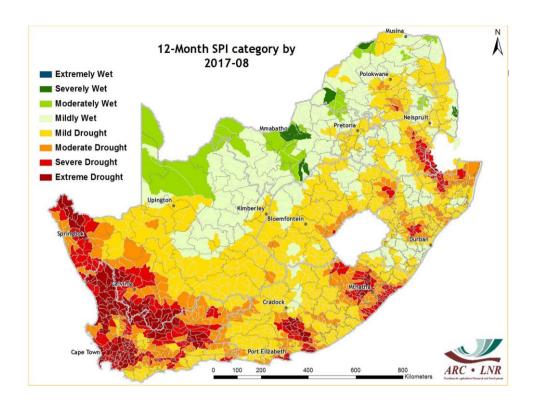


Source: National Department of Water & Sanitation

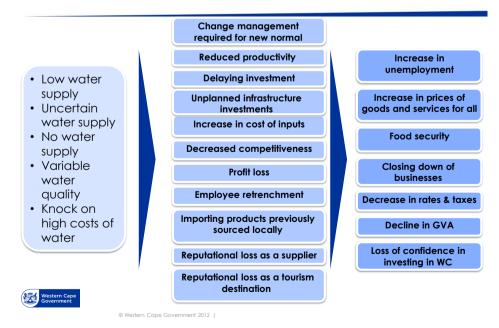


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## **Economic impacts of water crisis**



## **Sector focus**

ghly & moderately intensive users:

- Agriculture & agri-processing Construction
  Manufacturing

- Tourists use 3-8 times more water that residents in
- developing countries\*
  16 745 000 international tourist & 14 742 000 International Toolist & 14 742 000 domestic tourist bed nights in WC = 27 393 MI/ yr (@87 litres/p/d) = 75MI / day
- (conservative) 82 181Ml/yr (3x 87 litres/p/d) = 225Ml/day (3x)

Adds stress to municipal water systems in peaks (which affects municipal peak demand without commensurate revenues) & potentially significant reputational risk of water shortages

\*Source: Becken, S (2014) "Water Resources and Industry", Water Resources and Industry, Vo.17-8, pp. 9 – 22.



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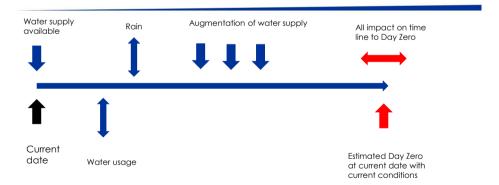


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# Time line towards possible "Day Zero"

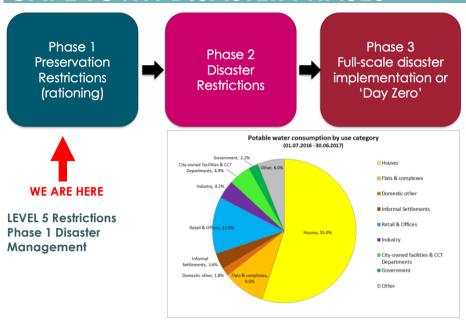


- "Day Zero" will not arrive suddenly and unexpectedly
- Monitoring Disaster Management provides an early warning for surface water crisis for a specific municipality
- Contingency plans for the critical municipalities being developed
- Town specific plans are being developed, taking the local situation and conditions into account.

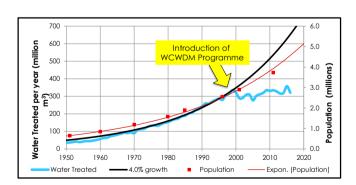
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# CAPE TOWN DISASTER PHASES



# **EFFECTIVENESS OF WCDM – 2000 TO PRESENT**



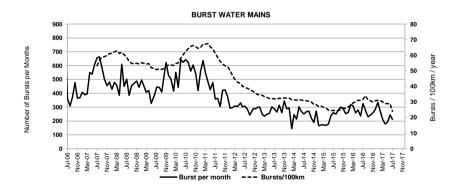
Water demand growth delinked from population growth Current water demand lower than 20 years ago – population increased by 1 million

# **CAPE TOWN WATER LOSSES**

METRO	DWS REPORT (2013)		SALGA's MBI (2015)	
	Water		Water Loss	
	Loss %		%	
City of Cape Town	15.2		14.7	
City of Johannesburg	36.5		24.8	
eThekwini	35.3		38.2	
Ekurhuleni	31.8		33.9	
Tshwane	22.9		22.4	
Nelson Mandela Bay	32.4		38.2	
Buffalo City	37.1		38	
Mangaung	35.7		28.3	
Msunduzi			32.9	
Average of above	30.9		30.2	
DWS & MBI Average	29.7		27.9	

National average for water losses as per the DWS "Strategic Overview of the Water Sector in South Africa 2017" puts national average for water loss across municipalities at 37%.

# CAPE TOWN PIPE BURST STATISTICS



### Water-Saving: Reducing economic risks

#### Onsite reand risks interventions **Efficient processes** Treated effluent Water audits Greywater re-Meter and and behavior Groundwater Monitor **Efficient fittings &** Process water Rainwater/ Water quality technologies re-use Stormwater requirements Desalination Water-wise Water landscaping Water from Air exchanae (fit-for-purpose) network Set targets Identify risks Increasing cost and complexity Work underway to develop & strengthen the water sector to enable above Source: GreenCape

# Event considerations: Demand changes & Emergency Planning

- 1) Work out your real need actual minimum vs historic use
- 2) Don't compromise health right water for the right job (the closer to your mouth the cleaner it needs to be)
- 3) What demand changes can you make reduce water usage?
  - **Behaviour** change the way you think about water bring your own bottle, waterless products, type of water e.g non potable for certain tasks.
  - Control on site tanks or linked to municipal supply
  - Venue SAVE BY DESIGN- request information on venue water usage
  - Team up with accommodation venues (FEDHASA championing reduction in usage)
  - Awareness signage, notice in announcements, practical hints, ethos from the beginning



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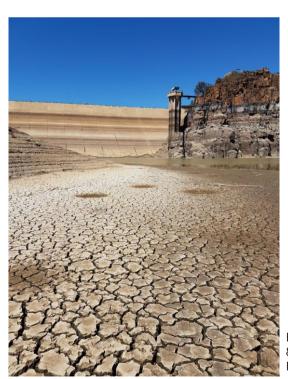
# Event considerations: Demand changes & Emergency Planning cont.

- 3) **Sanitation needs** water-less options. If traditional flush system has no water or low water pressure the toilet facilities are compromised.
- 4) **Educate yourself and ask for assistance** Municipality here to guide and assist and ensure they are ready for the peak requirements
- 5) **Donate** Built in fundraising/donation option there are already families out of work and desparate because of the drought and avian flu. Red Cross and Gift of the Givers set up to assist by WCG Dept of Social Development.



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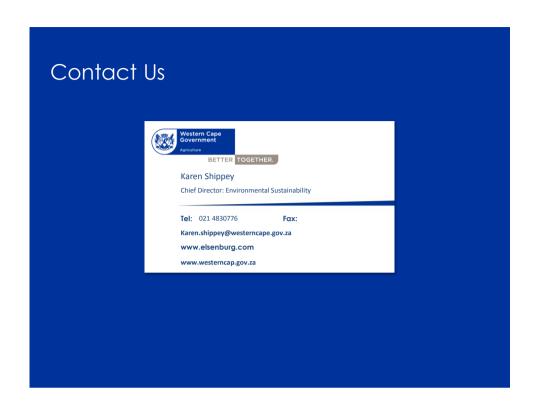
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# **Thank You**

Water saving starts with us...

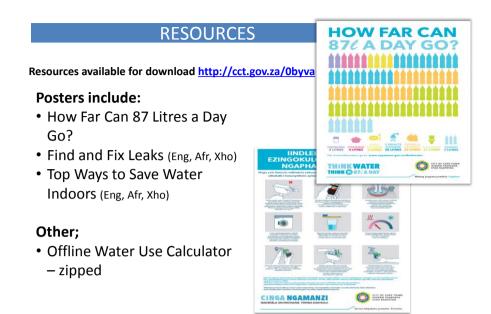
Beaufort West Dam 8 Nov 2017 Photo: J B Styan



## Water-Saving: Key support contacts for businesses

<ul><li>For technical business support incl:</li><li>Case studies</li></ul>	water@green-cape.co.za
<ul> <li>Benchmarking</li> </ul>	http://www.greencape.co.za/content/focus
<ul><li>Linking with water tech suppliers</li><li>Technology choices, etc.</li></ul>	area/business-support
For agricultural businesses see GreenAgri tools and water-related research	http://www.greenagri.org.za/
For general water for the economy programme support incl.:  Industry engagements  Links with municipalities  Licensing issues  Contingency planning  Website updates  Business related communication materials	helen.davies@westerncape.gov.za karen.shippey@westerncape.gov.za (contingency planning)

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www.capetown.gov.za/thinkwater



## Calculate your daily water usage

http://bit.ly/ThinkWaterCalculatorCT







# Possible donation items for WCG Dept Social Development to distribute

- ☐ Food stuff (dry food items, tinned food, fresh fruit and vegetables)
- ☐Sealed bottled water
- □Baby food (non refrigerated food)
- ☐ Disposable baby and adult nappies
- ☐Wet wipes and waterless sanitisers
- ☐Toiletries/ Sanitary packs (both females and males)
- ☐Toys (unbroken toys)
- ☐Books (children friendly)
- ☐Pet Food

Contact: Mr CAESAR SAULS – WCG Dept Social Development Phone: 021 483 3839 Email:

Caesar.Sauls@westerncape.gov.za



# Possible donation of services for humanitarian relief

### PROVINCIAL NGO PARTNERS

☐ RED CROSS

Contact: Ms Levona Van Aarde WC Provincial Manager and

**National Operations and Disaster Manager** 

Phone 021 7975360

Email: lvanaarde@redcross.org.za

### ☐ GIFT OF THE GIVERS

Website: http://www.giftofthegivers.org/ Phone: +27 (0) 21 691 0057 | +27 (0) 21 691 0043

Email: gawa@giftofthegivers.org

☐ Agreements being signed with DSD for co-ordination and allocation of donations of cash and kind so it is not delayed moving through Government Systems.





# Cape Town Disaster Response Management : Volunteer Units

• 14 DRM Units (approx. 400 trained response volunteers)

```
□ AED – defibrillator - R20000-00 x 15

□ Basic life support jump bags complete – R1500-00 x 30

□ Spine boards – plastic – R1500-00 x 15

□ Glucometers – R350-00 x 30

□ KED Extrication Device – R1100-00 x 15

□ Leg traction unilateral splint –R2500-00 x 15

□ Aluminium folding back board – R2800-00 x 15

□ Porta Vac Suction device – R8000-00 x 15

□ Bushbeaters for fire suppression – R150-00 x 60

□ Safety protection gear for fire fighting(jump suit)- R2000-00 x 100
```



EC 2017 Engagements