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## GENERAL MANAGER'S MESSAGE

In this this issue we focus on how YOU can save water at home through installation of well-designed water tanks for efficient rain water harvesting; as well as residential wastewater recycling systems ('bio digesters') for all your waste water.

With this simple but very effective measures implemented in our homes both in the rural and urban setting, we can save our cities and counties from counting down to a 'Day Zero' where our water supply will be nonexistent. No country, city or town should suffer from any form of water shortages or rationing especially with two abundant rain seasons; however, this is the case with most African countries and by simply collecting the water from our roofs and reusing most of it we can eliminate this cycle of rain dependency.

Save! Harvest! Recycle!

**Patricia Waithera**

**General Manager - CESP Africa**

## COMPANY NEWS

### Assembly plant to be set up.

Wastewater Treatment Plant systems are set be assembled locally. This has been confirmed by CESP Africa CEO Eng. Christopher Gathini.

Speaking at the company offices in Industrial Area Nairobi, the CEO said the company's plan is to set up an assembly plant each in Nairobi and Addis Ababa so as to lower the cost of the water recycling equipment.

This will afford the population to clean water and minimize environmental pollution as well as creating jobs which is one of President Kenyatta's big four.

### Superior Homes Wastewater

Superior Homes has signed a deal with CESP for a wastewater project. CESP is to install a wastewater system at their hotel located in Lake Elementaita in Naivasha.

The system is expected to recycle the wastewater from the hotel which consists of 52 rooms to mitigate environmental pollution and water wastage.

## NEWSPAPER REVIEW

Its not just Cape Town: More African cities face water crisis [Read More](#)

Eastern Mau Forest water tower might soon dry up [Read More](#)

North Rift stares at water crisis as major sources dry up [Read More](#)

China's acute water shortage imperils economic future [Read More](#)

Water rationing to continue for five more years [Read More](#)

A liquidity crisis: Cape Town now faces 'Day Zero' [Read More](#)





**Get the CESP Residential Wastewater Plant TODAY and say bye to countless exhauster costs.**

**Call Us on 0722 69 33 34/ 0722 88 39 44**

**WE TREAT WHAT YOU DISPOSE.**

# 4 Questions to Ask Before Buying a Water Tank

We talk to people every day about their tanks. We know there are important but not so obvious questions to ask before you make the big decision to invest in a water tank. Here they are:

## 1) WHAT'S ON THE INSIDE OF A TANK?

Getting the right tank liner is key to the ultimate protection for your precious water. We recommend selecting a tank liner that is made from a multilayered and reinforced polyethylene fabric with double welded polyethylene seams. This will ensure your tank is still providing your family clean and pure drinking water for generations to come!

What do Pioneer use? Only the best. Pioneer Water Tanks' exclusive Aqualiner®.

## 2) WHAT'S ON THE OUTSIDE OF THE TANK?

What's on the outside of your tank will dictate the longevity of your water storage investment. You'll need a solution that will provide ultimate protection to the harsh and extreme conditions of the environment in which you are looking to build.

Contrary to belief, galvanized tanks do not offer complete corrosion protection. We recommend selecting a tank that utilizes the next generation Zincalume® with Activate® technology which is proven to last up to four times the life of galvanized steel.

Your tank should meet industry standards in terms of the thickness of the panel walls and fixtures. Tank panels should be manufactured from steel between 0.8mm to 1.2mm thick depending on the size of your tank. Thicker does not always mean better, a thicker panel is always going to weigh significantly more.

This extra weight puts additional strain on the tank structure and unless compensated correctly can quickly compromise the fixings holding your tank together.

What do Pioneer Water Tank's use? Only the best. Next generation Zincalume® with Activate® technology.



## 3) WHAT AFTER-SALES SERVICE WILL I RECEIVE?

A water tank is a lifetime investment. You will want to know you can pick up the phone and contact the person who installed it and get a professional response and solution.

CESP Africa has a dedicated staff that is committed to offering only the best advice, care and servicing to meet your ongoing needs, long after tank installation. To find out more about Pioneer Water Tanks after-sales care and warranty periods call us on +254 715 281 537.

## 4) HOW WILL I COLLECT WATER FOR MY TANK?

Tank gutter systems are common. They appear attractive because they harness extra rainfall catchment but this comes at the cost of the system bypassing the tanks leaf filter basket. This means, any water coming off your tank roof, and any organic matter and debris is going straight into your water supply.

By choosing not to install a gutter on your tank, you eliminate any chance of contaminants entering your fresh water supply. If you still want to harvest rainwater from the roof of your tank, you can.

Pioneer has perfected the Rainsaver cap roof system to ensure your water supply remains fresh and clean. Find out more, free call +254 715 281 537.

Also, you really need to consider:

1. the quality of materials
2. the way the tank is constructed to ensure maximum longevity of your water tank.

A Pioneer Water Tank features top grade fittings and fixtures to ensure your tank will stand the test of time. Take a moment to discover the difference:

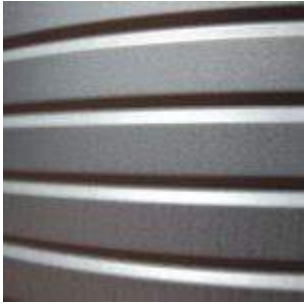
### STANDARD INCLUSIONS

#### HIGH TENSILE BOLTS



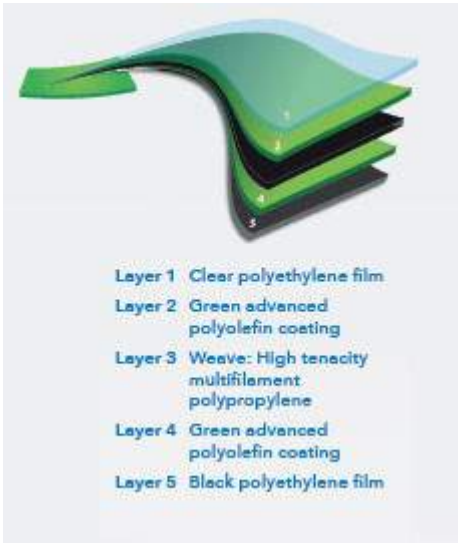
Specifically engineered for strength and durability, our bolts are galvanized high tensile 8.8 grade. Not only are they hardened and super strong, they are the most resistant bolt on the market to shear under pressure.

### 8-80 V-LOCK



Pioneer Water Tanks' exclusive 8-80 V-LOCK is specifically engineered to maximize the strength of corrugated steel without damaging or stretching your liner when moulded to the tank wall. In fact, independent testing proves that our 8-80 V-LOCK provides the ultimate shock absorption to prevent movement or sinking.

### AQUALINER®



With a life expectancy of 65 years, our state-of the art five-layer Aqualiner® stores your water without compromising the quality and purity of the water it contains. Designed to fit the Pioneer Water Tank, the Aqualiner® is strong and versatile. Therefore, it can be fitted to any other water tank with no loss of quality.

### SACRIFICIAL ANODES



Our sacrificial magnesium anodes significantly extend the life of your water tank by protecting the tank from corrosion. Made from magnesium, the anodes erode in

place of the water tank, thereby protecting the steel and allowing the tank to live longer and stronger. Pioneer Water Tanks recommend your anodes be replaced every 10 years so you can enjoy the benefits of your tank for life.

### 150MM DIAMETER OVERFLOW



Pioneer Water Tanks provides a 150mm overflow down pipe: the largest overflow system on the Australian market. Its size moves excess water away from the tank quickly to effectively reduce pressure on your tank and avoid costly damage to your tank components.

### HEAVY DUTY TRUSSES



Our exclusively engineered trusses are hot dipped galvanized steel equipped with a swivel foot. As a result, it provides optimal movement in your tank in Australia's extreme heat and wind conditions. As your tank adapts to external conditions, you can rest easy your tank won't fail when you need it most.

### GOT A QUESTION?

Contact one of our friendly and knowledgeable team members and discover the difference.



**SELL**  
**THE PROBLEM**  
**YOU SOLVE,**  
**NOT**  
**THE**  
**PRODUCT.**

**At CESP Africa, we believe in selling of  
WATER SOLUTIONS in the form of our  
PRODUCTS and EXPERTISE.**

**Call Us today on 0715 281 537.**



# Operation Okoa Mvua, Linda Maji



Domestic Pioneer Tank



Domestic Pioneer Tank

*Think* **TANK**, *Think* **CESP**.



# Cape Town Water Woes and What Nairobi can Learn



**An aerial view of the City of Cape Town**

**T**he impending water shortage problem facing a number of African cities is no news; it is a perennial thing. Down South in Mzansi, it seems things have really gone south. Day Zero refers to the date when the City of Cape Town could turn off the Municipal water supply to businesses and households outside of the Central Business District.

As a consequence residents will collect a daily water ration from distribution points. Day Zero is not inevitable. It is a theoretical date calculated daily based on rainfall projections, infrastructure projects coming on stream and water usage across the entire system – households, business, agriculture and industry.

Municipal water is still being supplied and all services (health, safety, waste, sanitation) are functioning as normal but residents of Cape Town and surrounding areas are required to keep to a daily usage limit of 50 litres per person. Retailers too are limiting customers to 50 litres of bottled water as panic buying spreads.

known for a robust tourism sector and agro-processing industry, both of which are heavily reliant on water. The wine & hospitality industries have been hard hit as they rely on water for irrigation and running hotels respectively. Irrigation water has been cut by 80% for an industry that supplies 20% of the world's wine market.

**C**ape Town hosts about 1.6 million tourists per year and spend about R40bn (\$3.3bn), according to South African Tourism. Hotel such as Tsogo Sun Holdings plans to build a desalination plant that will help supply its Cape Town hotels with their own water, shielding guests of South Africa's biggest hotel and casino operator from the city's deepening water crisis.



**Theewaterskloof Dam near Cape Town, 6 May 2016.**

The shortage is as a result of a prolonged drought that has lasted three years and by some calculations, is worst drought ever to hit the city since 1933. The irony is that this is happening in a coastal town with two oceans, the Indian and the Atlantic, lapping

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**“ Building another dam was just half of the solution, making people understand the value of water is the other half ”**

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On the line is the country's economic growth. Cape Town contributed 9.9 per cent to South Africa's GDP in 2016 and is well



at its shores.

Baths are discouraged and showers are recommended to 90 seconds max. Swimming pools have resorted to salty water. Toilets can't be flushed using sea water simply because salt corrodes pipes and wastewater plants can't handle salinity.

This year, 'Day Zero' may be delayed as a new desalination plant opens on the second week of March on the West Coast and is expected to deliver 1, 100 m<sup>3</sup> litres of fresh water using "reverse osmosis" process to separate out salt and mineral particles from sea water.



**The desalination plant. PHOTO: James Hall**

To boost availability of water, the City has invested in grey water systems to ensure all hygiene functions are serviced without using any Municipal/potable water. Only bottled water will be served for drinking, sourced from certified producers outside of the Western Cape or water constrained areas.

Using rain water collection tanks, grey water savings and air-to-water harnessed from the HVAC systems, all maintenance and cleaning activities are serviced by this supply, meaning no impact to potable water supplies. This elaborates how a combination of advanced wastewater and water treatment methods can help alleviate the water crisis.

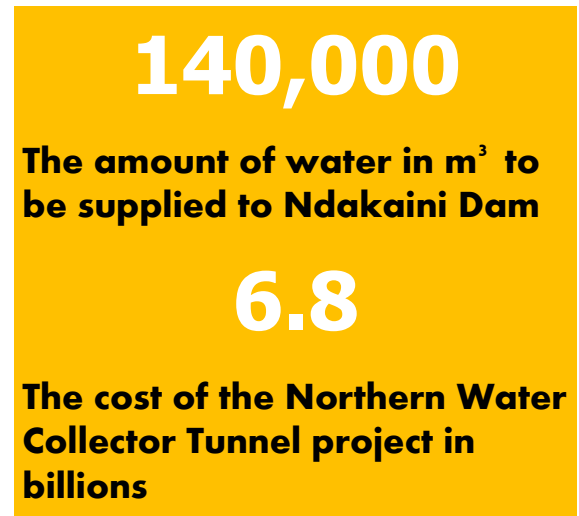
Already, the meteorological department has put a red flag on Kilifi County, another coastal area, for unending droughts in about ten years' time for this reason.

The fate of Cape Town is just a reminder to the world that the golden age of water is coming to a close and these calls for serious mitigations to achieve the SDG 6 or face worse. According to Jean-Pierre Labuschagne an infrastructure expert with Deloitte, Cape Town is not going to be the only city on this continent that's going to suffer significant water shortage. "Part of the problem with water is you need to think many years in advance ... You have to be able to cope with changes in climate." Building another dam was just half of the solution, making people understand the value of water is the other half," he added.

**K**enya is heavily reliant on surface water which is prone to the vagaries of the weather. Nairobi gets its water from five different sources whose levels have been dropping at key reservoirs since the beginning of this year. Nairobi City Water and Sewerage Company announced that the capital could face water shortages by April if the country's main rainy season, from March to May, fails. Their Ghanaian correspondent has put out a similar notice.

Last year Nairobians had to endure long months of water rationing due to a drop in water levels in the main supplier; Ndakaini dam. This prompted the government to forge an ambitious plan of supplying water from rivers Irati, Gikigie and Maragu in Murang'a County daily and stored at Ndakaini dam estimated at 140,000 cubic metres. This is a bid to mitigate the demand that has outstripped supply by 600 per cent.

This project dubbed the Northern Water Collector Tunnel (NWTC) has had its own fair share of bottlenecks ranging from politics



to locals. Residents of Gatanga and Kigumo constituencies have vowed not to allow the ksh.6.8 billion to proceed until they get piped water in their own backyard first. They have accused the government of negligence as the local water service board– Athi Water Services carries on with the project meant for Nairobi.

The local leadership is seeking a 30% of the revenue collected from supplies in the city. The governor has threatened to move to court if the county doesn't receive a share of the revenue collected.

Last year, the opposition chief called on the locals to oppose the plan as it would adversely affect livelihoods in the Tana River Basin that is dependent on water from Aberdare Ranges. It has been rumoured that if the plan goes on as planned, then there's a looming drought in Murang'a County.

Our hopes are vested on the long rains in April which have proved unreliable lately. We could learn a lesson and apply some of these techniques in a bid to mitigate the water shortage and rationing problems should the rains fail.

# Combat Waterborne Diseases From Your Home NOW



**Beat Waterborne Diseases TODAY.** At CESP Africa we believe life does not have to be expensive. Our Engineers have taken into consideration our customers' needs and combined that with mother nature's to create a water treatment system that is affordable and still achieves up to 99.99% water purification.

**Talk to Us today on 0722 69 33 34 or 0722 88 39 44. You can also drop us an email to [info@cespkenya.com](mailto:info@cespkenya.com)**

Visit [www.cespafrica.com](http://www.cespafrica.com) for more information



# 10 Hard Facts About Water Pollution in Africa

Africa has been devastated by water pollution

## Here are 10 hard facts about Water Pollution in Africa



85% of diseases in African toddlers are due to a lack of clean drinking water



319 million people living in Africa don't have regular access to clean water



159,000,000 people relying on ONLY surface water live in Africa.



695 million people in Africa live without clean sanitation options



42% of all the healthcare facilities in Africa don't have drinking water



In Africa, 650 people a day die from water-related diarrhea



Only 16% of people living in sub-Saharan Africa have access to water taps



In 2001, 10,000+ people fell ill with cholera due to unsanitary water



30% of the water supplies only 10% of the population



Endangered species are dying out because of the disappearing water table

# Feature Project: El Signature



## The Entrance of The El Signature

At the heart of Westlands along Eldama Ravine where affluence oozes in this residential cum commercial area, lies the meticulous El Signature apartments. The apartments have incorporated Vastu and Feng Shui principles to achieve the perfect balance of comfort, style, functionality, efficiency. The former is a traditional Hindu system of architecture which loosely translates to "science of architecture" while the latter is a Chinese metaphysical and quasi-philosophical system that seeks to harmonize individuals with their surrounding environment and loosely translates to "wind-water" in English.

The property developed by the Elm Ridge Ltd is a 24 modern apartments spaciouly designed within a six story tower and consists of 3 bedroomed apartments that come in two different types:

- i) 3 and 1/2 Bedroom + Double SQ with independent entry and goes for kshs.42 Million
- ii) 3 Bedroom + Double SQ with independent entry and goes for kshs.40 Million

The facility boasts of borehole water facilities, solar water heating among others. The development is supplied by one borehole whose water has undergone advanced water treatment to ensure clean and safe water for domestic use.

Down in the basement next to the parking lot sits a water treatment plant. CESP Africa was contracted to install 2 ROs with a capacity of 3,000 GPD and 6,000 GPD respectively which in total treat approximately 33,750 litres per day! The borehole water is pumped into a raw water storage tank which then is pumped to the ROs. The ROs have membranes that purify the water by removing suspended solids, excess water minerals that may be harmful to the inhabitants, turbidity and color.



## The Reverse Osmosis System at The Apartments

The water then is chlorinated to kill any bacteria that may be deemed harmful for human consumption.



**Operation Maji Safi**

**Coming to a City Near You.**

# Crossword Puzzles

## Last Month's Answers

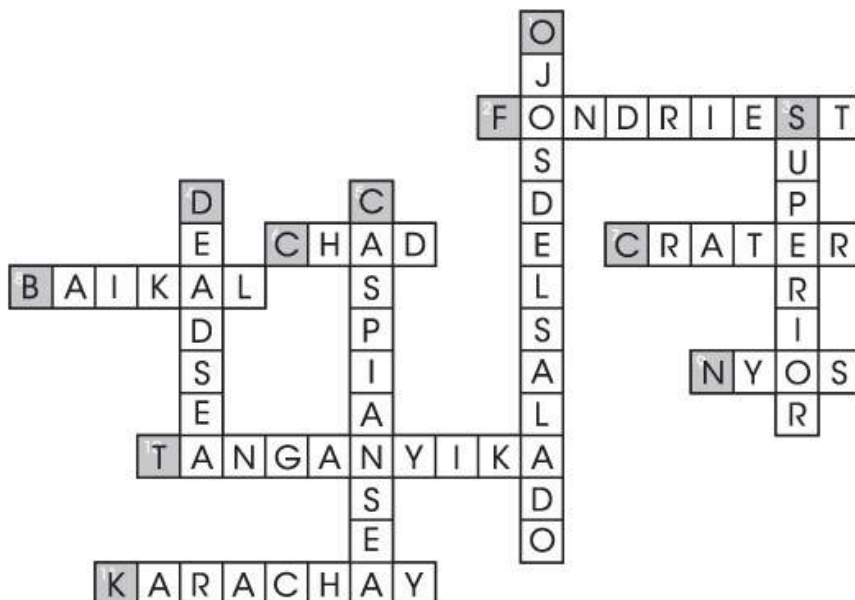
### World's Most Extreme Lakes

#### Across

- Where to buy a lake monitoring buoy
- Shrank by 95% since 1963
- U.S. lake is likely the clearest
- Deepest lake
- Released a CO<sub>2</sub> cloud in 1986, killing 1,700
- Longest lake
- Russian lake thought to be the most polluted on Earth

#### Down

- Highest elevation lake (20,965 feet above sea level)
- Largest freshwater lake by area
- Lowest elevation lake (1,385 below sea level)
- Largest saltwater lake by volume and area



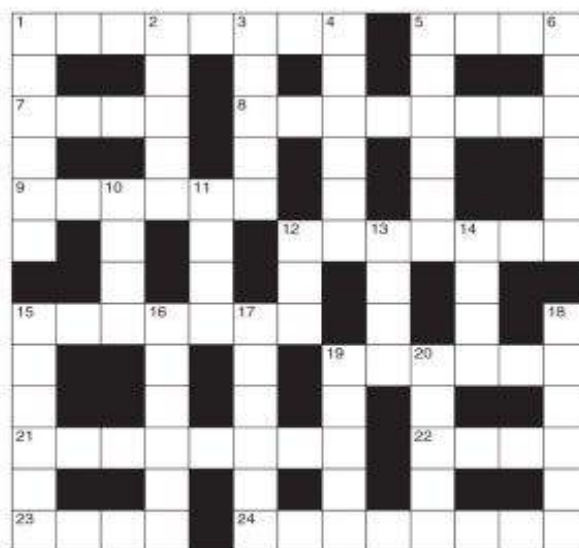
## Around The World

### ACROSS

- US volcano, Mount ... (2,6)
- Supersonic planes
- Taj Mahal city
- Cambridge & Oxford universities
- Treeless Arctic zone
- Coniferous tree found in Europe
- Vienna is there
- Croatian capital
- Peninsula in southwest England
- Manchurian river
- Central attraction of Piccadilly Circus
- Region that includes Japan, China and Korea (4,4)

### DOWN

- Roughly built settlements, ... towns
- Large African antelope
- Nasty disease named after a river in the Democratic Republic of the Congo, ... virus
- Underground train system
- City of northwest India
- People from Stockholm
- Scotland's monster lake, Loch ...
- German industrial region
- Washington-based spy group (1,1,1)
- Italy's Leaning Tower of ...
- Kuwaiti ruler



### ACROSS

- St. Helens
- Jets
- Agra
- Oxbridge
- Tundra
- Austria
- Zagreb
- Amur
- Eros
- East Asia

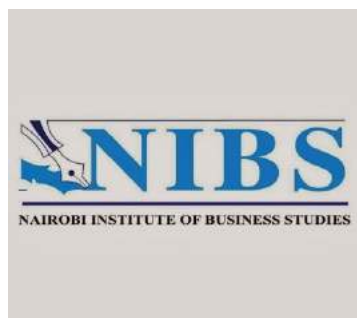
### DOWN

- Shanty
- Eland
- Ebola
- Subway
- Jaipur
- Swedes
- Ness
- Ruhr
- CIA
- Pisa
- Emir
- Apache
- Tennis
- Ice Age
- Iberia
- Zulus
- Ghana

- Native American tribe
- Sport played at Wimbledon
- Earth's glacial period (3,3)
- Portugal and Spain
- Bantu peoples of Natal
- West African nation



# OUR CLIENTELE



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*To provide our clients with precise engineering solutions and products that meet international standards and are environmentally friendly.*

*Save. Harvest. Recycle*

Get Social:



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