

The Water Review

Securing Water for Africa

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Clean and Safe Drinking Water Without a Bottle.







Be safe, take ACTION NOW. Keep water related diseases at bay TODAY!

The government has set a goal for the next 5 years to improve health through provision of clean and safe water.

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.

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ABOUT US

CESP Africa Group is an international firm with headquarters in Nairobi, Kenya.

The organization was started with an aim of addressing Africa's challenges in the engineering field and more specifically in the water, energy and construction sectors.

CESP Africa has been in operation in Kenya for over 8 years and has operations in neighboring East African countries through selected and verified distributors.

Success of the business units in each country is based on CESP Africa's ability as a whole to offer sustainable, innovative and useful engineering technologies in Africa and also be able to attract and raise appetite for the right technology partners globally.

The concept of selected distributors allows repeatable and a scalable business models across the regions.

In addition, the long run goal is to have a one stop business unit for all engineering needs on the continent.

Our Vision

To be the leading engineering solutions provider of choice in Africa.

Our Mission

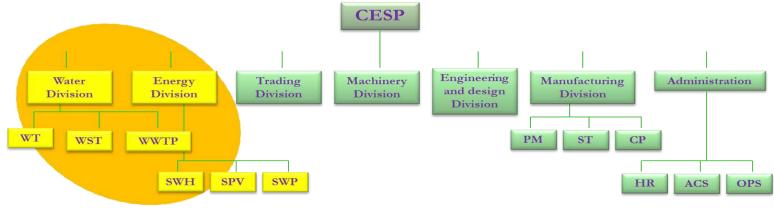
To provide our clients with precise engineering solutions that meet international standards, are environmentally friendly using local expertise.

Our Values

Honesty, Integrity, Respect, Dynamic Culture, Passion.



CESP Organizational structure







COMPANY NEWS

- 1. Amherst University to sign MoU with CESP Africa. The university's department of engineering and environment is set to sign a Memorandum of Understanding with CESP Africa in water research in the East African region.
- 2. Engineering Unit to be established. An engineering manufacturing unit is to be established by mid 2018 to facilitate local manufacturing of water products. The products will include: stand alone dispensers, table tops, under sinks among others.
- CESP Africa set for expansion. The water solution company which has a footing in Kenya and Ethiopia, has its eyes set on Africa as it looks forward to establish its presence in Uganda, Rwanda, DRC, Congo Brazzaville and Liberia.
- 4. CESP Ethiopia signs its first deal. CESP Africa has signed its first deal with the medical campus of Bahir Dar University. The deal will see the campus acquire a wastewater treatment plant to protect the ecosystem using advanced technology.
- 5. Treated wastewater generating revenue



Bamburi Cement Plant in Two Rivers

Two Rivers Mall under its licensed water company (Two Rivers Water & Sanitation Company) has been selling treated wastewater to Bamburi Cement since September 2017. Bamburi cement uses the water for batching concrete which is sold to construction sites. The facility utilizes 1,000 m³ of water per month and the treated wastewater retails at kshs. 150 per m³. The wastewater treatment plant is among others one of the water plants installed and run by CESP Africa until when it sold it to Two Rivers.

6. Residents set to benefit from CSR. Residents of Ruaka are set to enjoy fish from next year after river Ruaka was dammed and fish introduced in the dam. This is part of a corporate social responsibility by Two Rivers development that will see fish lovers partake in the fishing when the fish mature.



A dammed section of River Ruaka

WATER FACTS

- 1. 97% of the world's supply of fresh water is located in Antarctica.
- 2. The urban poor pay up to 50 times more for a litre of water than their richer neighbours, since they often have to buy their water from private vendors.
- 3. 90% of all natural disasters are water-related. (UNISDR)
- 4. 1.8 billion people use a source of drinking water contaminated with faeces, putting them at risk of contracting cholera, dysentery, typhoid and polio. (WHO/UNICEF 2015)
- 5. The costs of wastewater management are greatly outweighed by the benefits to human health, economic development and environmental sustainability providing new business opportunities and creating more 'green' iobs. (UN-Water. 2011)
- 6. Hygiene promotion is the most cost effective health intervention. (World Bank 2016)
- 7. Agriculture accounts for 70% of global water with-drawal. (FAO)

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Fast Tracking SDG 6



In September 2015, the General Assembly adopted the 2030 Agenda for Sustainable Development that includes 17 Sustainable Development Goals (SDGs). The new Agenda emphasizes a holistic approach to achieving sustainable development for all.

Water scarcity affects more than 40 percent of people around the world, an alarming figure that is estimated to increase with the rise of global temperatures as a result of climate change. Although 2.1 billion people have gained access to improved water sanitation since 1990, declining supplies of safe drinking water is a major problem impacting every continent.

By 2050, at least one in four people is likely to live in a country affected by chronic or recurring shortages of fresh water.

A stress goal is 6 as it touches on clean water and sanitation. These are crucial as several of the rest of the goals are embedded on them. It seeks to achieve the following by 2030:

- 1. Universal and equitable access to safe and affordable drinking water for all
- 2. Access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations
- Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally
- Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity
- 5. Implement integrated water resources management at all levels, including through trans boundary cooperation as appropriate

- 6. Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aguifers and lakes
- 7. Expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies
- 8. Support and strengthen the participation of local communities in improving water and sanitation management.

Many lives are lost due to poor sanitation and unsafe water. Aqua life is dead due to improper release of contaminated wastewater into water bodies leading to water borne diseases.

Back in Kenya the government embarked on a very ambitious project called the Vision 2030 which is in line with the Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs). The social pillar is crucial for the country's well-being as it focuses on education and training, health, environment, housing and urbanization, gender, children and social development, youth and sports.

Under the environment, Kenya hopes to develop a solid waste management policy and a better waste management system, fully rehabilitate and protect five water towers, improve and modernize weather observation, analysis and forecasting as well as dissemination systems, harness water resources and improve availability as well as quality, construct/rehabilitate 77 small dams in 70 ASAL districts, increase water storage and harvesting capacity.

This goal can be achieved through proper management of water resources, proper wastewater management and water recycling. In Africa, a myriad of water challenges are being solved through use of water technologies such as water treatment, wastewater treatment and water storage. Big multinationals are embracing these technologies. Centum, Tullow Oil, Britam Kenya, Uniliver Kenya, and US embassy Kenya are just but to mention a few.

OUR PROJECTS



Two Rivers Mall Development, Ruaka, Kiambu County.

SIZE: 100,000 Litres per Hour Reverse Osmosis water



ITE Dam water project, Kiambaa, Kiambu County.

Size: 25m³ Ultra Filtration water purification system.



AFEX Kenya Limited - Tullow Oil Kapese Camp.

Size: 250m³ and (2x)480m³ water storage tanks.



Community water tank, Kilifi County. Size: 110m³ Pioneer tank.

OUR 100,000 LITRES PER HOUR COMMERCIAL WATER TREATMENT SYSTEMS





East and Central Africa's Biggest Mall Turns to CESP Africa for Water Solution



Sitting on a whopping 1.7 million square feet and wedged between the Northern Bypass and Limuru Road, is East and central Africa's biggest mall, a fraction of the whole 102 acres of the Two Rivers project. The intriguing part is the mall lies between two rivers; rivers Giichi and Ruaka hence the name 'Two rivers'. Two Rivers Mall is owned by Two Rivers Lifestyle Company Ltd, a conglomerate of several firms namely: Centum Group (the majority shareholder), Aviation Industry Corporation of China (Avic) and Industrial and Commercial Development Corporation (ICDC) - a Kenyan owned development finance and investment company.



The entrance of the Water Management System

The mall is made up of medium density residential homes, office blocks, a shopping center, as well as a vast range of restaurants i.e. the City Lodge's three-star 170 key hotel. Some of the renowned tenants include Carrefour a French retailer, which operates more than 12,000 outlets globally, and is the mall's anchor tenant; the Turkish luxury fashion line LC Waikiki, Woolworths, Hugo Boss and Nike.

The mall demands 2,000 m³ of water daily which is overwhelming for the water provider; Nairobi City Water and Sewerage Company. This enabled Two Rivers to obtain a license to drill 7 boreholes to meet this expectation. So far, 4 boreholes have been sunk and the rest are set to be drilled as expansion takes place. 2 of the already drilled boreholes are for drinkable water, and this water contains fluoride which dissolves in water and has to be removed using reverse osmosis. With water consumption comes wastewater which cannot be disposed directly into the environment without treatment.

Besides the wastewater treatment system, CESP Africa has also installed a Supervisory Control and Data Acquisition (SCADA) system that allows for remote monitoring and diagnosis of the installed wastewater treatment system which enhances a timely, safer and overall more efficient project maintenance procedure.



The big three at the plant

This led to establishment of a water management system plant just a few metres away from the mall. The plant entails a water treatment plant, wastewater treatment plant, 3 water storage tanks (500m³, 2,600m³ and 1,100m³) and a water laboratory for quality assurance. The mall has set up its own water company to run the facility.

The borehole water is pumped into the first tank (500 m³) then passed through the treatment plant, and then to the second (2,600m³) tank for storage. The potable water is finally pumped to the last tank situated in the mall for distribution. This is used in running the mall activities and the rest is sold to establishments at kshs.180/m³. The wastewater collected from the mall is channeled to the wastewater treatment plant where it is treated using a Jet bio digester and stored in the 3rd tank (1,100 m³) for reuse.

The treated wastewater is up to the World Health Organization (WHO) and National Environmental Management Authority (NEMA) and is used for irrigation (Two Rivers has 38 acres of landscaping), firefighting and the rest is sold to the nearby Bamburi Cement plant. The plant consumes 1,000m³ per month. This is sold at kshs.150 per m³. The water is used for batching concrete.

At the moment there's no excess effluent, so no water is released back to the environment, hence attainment of minimal wastage. In future, wetlands and dams are to be constructed and fed by the excess treated wastewater as more developments are expected to come up.

OUR CLIENTELE







































THE MANAGEMENT AND STAFF OF CESP WISH YOU A

Merry Christmas

AND A PROSPEROUS 2018



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