Water Solutions

DUPONT

Delivering safe drinking water, transforming societies

Municipal

Suez, Egypt case study

The Challenge

To produce high quality drinking water in a Middle Eastern region with minimal rainfall, serving four towns with up to 60,000 inhabitants each in a cost effective, flexible way.

Classified as a water scarce country, Egypt has less than 1,000m^3 of fresh water per year per capita - and with the population set to reach 115 million by 2025, the race is on to deliver adequate supplies to support such growth.

The Suez Governorate, north of the Gulf of Suez in the North East of Egypt, is already one of the most urbanized regions in the country, putting great pressure on limited resources: with conventional treatment systems seeing deterioration in water quality, there is an opportunity to create a new water treatment system that would have the flexibility to meet rising demand in a cost effective, highly practical way.

The Solution

Water Solutions in cooperation with IETOS our local partner designed a containerized Ultrafiltration plant in a modular set up: built from pre-engineered, pre-assembled units, the plant can be put together in a fraction of the time compared to conventional water treatment facilities – the plant is operational in just three months, compared to the twelve months which would usually be expected for traditional designs.

The containerized plant – the first one Water Solutions – IETOS has built in Egypt – is the first of four within the Suez Governorate, designed to serve four villages with around 60,000 inhabitants each. Using the very latest, state-of the-art Ultrafiltration techniques from Water Solutions, the compact treatment plant is just one third of the size of the previous facility, which used traditional coagulation, sedimentation and sand filtration techniques. Not only is the new system smaller, it is more efficient at delivering higher quality drinking water without heavy addition of treatment chemicals: the IntegraPac™ Ultrafiltration solution excels in systems with a small footprint, and added XP fibers in the modules enables up to 35% higher permeability, increasing productivity.

In addition, thanks to the containerized design, the treatment plant can be extended with further modules to meet rising demand, and even moved to other areas if needed. The current capacity of 5,000m3 per day can be expanded by up to 25% without requiring further mechanical or electrical work, simply by adding more modules to the bays which have been designed to allow for such extensions.

Fast facts

Project:	Containerized Ultrafiltration Plant
Location:	Suez, Egypt
End user:	Suez Governorate
OEM:	INTEGRATED ENVIRONMENT TECHNOLOGIES (IETOS)
Key Solutions:	IntegraPac™ IPD-51XP

Key benefits

- High-quality drinking water in water stressed area
- Compact design
- Reduced construction time due to pre-engineering
- Reduced chemical intake compared to conventional system
- Flexibility: ability to upscale

The Benefits

- All components delivered in a highly flexible, modular design which can be up-scaled to meet demand.
- Successful delivery of 5,000 m3/d of high quality drinking water in a more sustainable way than traditional alternatives.
- Reduced footprint with container-based scheme.
- A cost effective, practical solution for a water-scarce country working hard on its transformational journey: access to clean, safe drinking water transforms communities, improving health, supporting greater productivity and helping to create a brighter future.

DUPONT™

Water Solutions
Have a question?
Contact us at:
dupont.com/water/contact-us

609-50809