

# Process Water Treatment

Food & Beverage | Reference: Soft Drinks Production, UAE

## Client

The customer is franchisee and distributor of a major international soft drinks brand in the United Arab Emirates (UAE). The company has been at the forefront of the UAE refreshments industry for over 50 years continually expanding through major investment in the latest bottling technology complemented by the highest levels of quality management.



## Benefits

The **BERKEFELD PurBev®** hygienic standard is based on the expertise of our engineers specializing in beverage water solutions. It takes into account both legal requirements and international standards & directives applicable to beverage water production.

- Optimum product quality & product safety
- Maximum system availability
- Economical operation

## Assignment

Counteracting and reducing the effects of water scarcity in the UAE the main goal is minimizing city water use by maximizing water reuse and recycling. The different water streams with high organics, high total dissolved solids, oil and grease (truck wash) required a complex treatment process consisting of a process and bottled water unit, backwash water recovery unit and a waste water treatment unit. The treated wastewater will be used for irrigation, truck washing, general housing and as feed for utility water production.

## Solution

Veolia's process design for **process and bottled water treatment** supports the client's sustainability target by meeting their international system design requirements. By applying the **BERKEFELD PurBev®** hygienic design standard for beverage water treatment, optimum product quality and safety will be achieved by minimizing microbiological risks. The product water quality complies with the stringent limits for irrigation in the UAE:

- $TDS_{max} < 1000\text{mg/l}$
- $COD < 100\text{mg/l}$

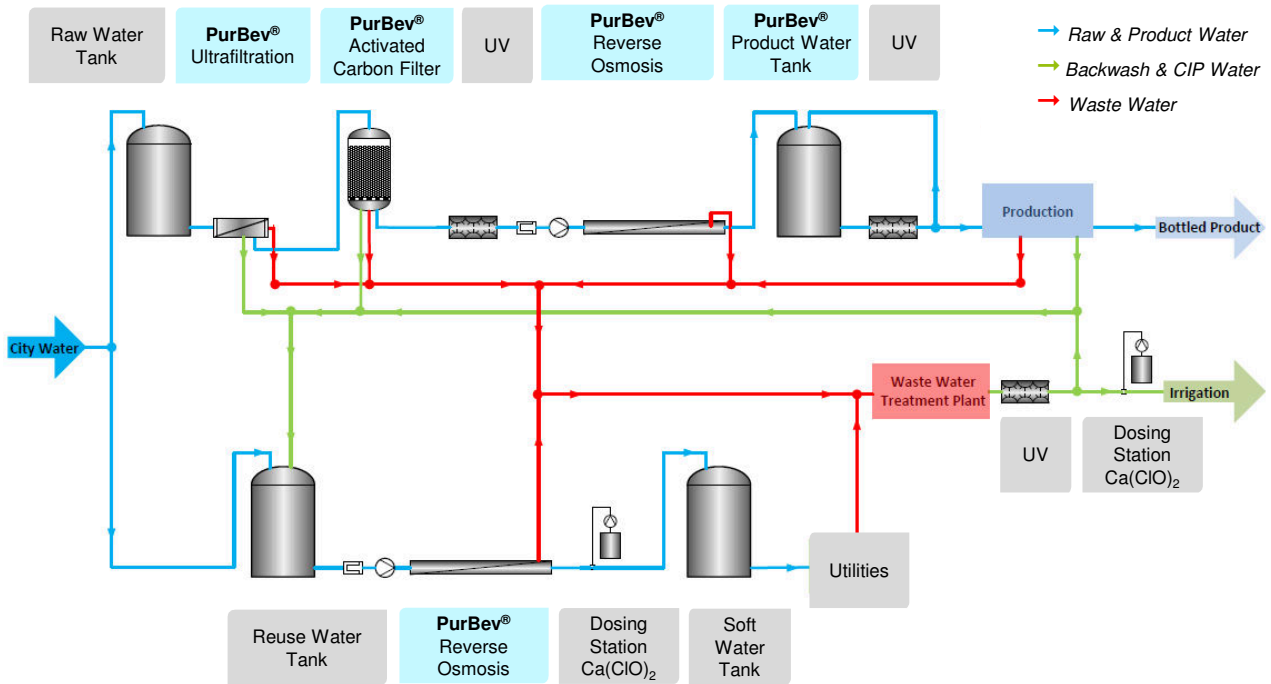
Installation of the process water treatment plant will be finished by autumn 2015. Depending on the operational demands optional extensions to the process water treatment plant will be considered.



In a second step the **waste water treatment plant** will be gradually developed according to the contamination load of the production plant.

# Process Water Treatment

## Process Description



Treatment Process	Main Component
Removal of dissolved solids	<b>BERKEFELD PurBev®</b> Ultrafiltration
Improvement of taste and odour Removal of oxidation agents	<b>BERKEFELD PurBev®</b> Activated Carbon Filter
Disinfection by UV radiation Reduction of NDMA & micro load	UV
Disinfection	Dosing Station $\text{Ca}(\text{ClO})_2$
Desalination	<b>BERKEFELD PurBev®</b> Reverse Osmosis



## Capacity

- **Raw Water Intake Process Water** = 162 m<sup>3</sup>/h
- **Raw Water Intake Utility Water max.** = 85 m<sup>3</sup>/h
- **Process Water Production (Permeate)** = 120 m<sup>3</sup>/h
- **Product Water – peak flow** = 180 m<sup>3</sup>/h