

CASE STUDY

RO-200 Series

Water Store Industry



Web: www.pureaqua.com

Email: sales@pureaqua.com

Phone: +1 (714) 432-9996

Toll Free: +1 (844) 309-7501



Made in USA

 **PURE AQUA, INC.**[®]



Commercial RO System for Water Store

Country: Colombia | **Capacity:** 4,500 GPD

Challenge

Drinking water from any source must be thoroughly purified; especially when derived from a well. In order to offer safe water for consumption, multiple contaminants are required to be reduced to a certain degree. Well water in particular is known to consist of elements that are harmful to consume. Therefore, necessary treatment systems are needed to be applied to produce the necessary water quality for this application. The World Health Organization (WHO) has mandated certain requirements for drinking water quality that must be met. Other elements like chlorine might also be reduced to enhance the taste of the water. Systems to counter issues like elevated fluoride levels and hardness are also important to consider when supplying drinking water publicly.

Solution

A commercial RO system was recommended to a water store for production of high-quality drinking water. In efforts to comply with the requirements set by WHO, this system includes a process of six-stage purification. First, the feed water goes through a prechlorination unit to decrease the potential for bio-fouling. Second, the multi-media filter reduces the turbidity or suspended solids present in the well water as a preparatory step for the RO system. Third, the water passes through a carbon filter to remove any chlorine residuals prior to contact with the membranes. Fourth step includes a water softener to reduce hardness in the water in order for the RO unit to efficiently remove all major contaminants. Next, the water is guided through the commercial RO system for further purification and fluoride reduction. This step consists of finely pored membranes that produce the highest quality water. Sixth step includes a UV sterilizer utilized for further disinfection.

Applied System

This system included a prechlorination unit (**CDS**), a multi-media filter and carbon filter from our **MF-400 Series**, a water softener from our **SF-500 Series**, a commercial reverse osmosis system model **#TW-4.5K-340** was selected from our **RO-200 Series**, and lastly a UV sterilizer from our **UVC Series**.

Project Video



Features

- 4" TFC spiral wound membranes ESPA1-4040
- Low pressure switch
- 5 GPM, recycle, product and reject flow meters
- SS304 inlet solenoid valve
- SS304 frame
- High pressure pump booster pump with 1 HP motor
- 0-100 PSI Pre/post-treatment and 0-350 PSI pump pressure gauges
- Recycle valve for higher recovery rate
- 300 PSI FRP pressure vessels
- Big Blue # 10 prefilter with 5-micron cartridges

RO-200 Series Product Video

To learn more about our RO-200 Series product, watch this video!



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