

# CASE STUDY

## RO-500 Series

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**Industrial Brackish RO System  
for Livestock Drinking Water**



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**Made in USA**

 **PURE AQUA, INC.**<sup>®</sup>



# Industrial Brackish RO System for Livestock Drinking Water

**Country:** USA | **Capacity:** 360,000 GPD

## Challenge

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Livestock health is an important component to the human health. With livestock producing forms of dietary provisions, their health and what they consume indirectly affects humans as well. Therefore, starting from the very beginning and ensuring that the water consumed does not contain bacteria, viruses, or contaminants is crucial to the preservation of public health. The milk produced from these cows was to be forwarded to a local cheese factory. For this reason, grazing healthy livestock is pertinent for the different dietary aspects they contribute to; meat, dairy, etc.

## Solution

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This industrial brackish RO system was recommended to provide a supply of ultimately purified water for livestock to drink. This process consists of 4-stages. First, the water is sent through a multimedia filter to reduce suspended solids and overall turbidity. This system included three parallel filters to work simultaneously. Next, as the water travels to the next filtration step, a sodium metabisulfite injection is in place to reduce the chlorine levels of the water. Thirdly, an antiscalant dosing system is incorporated to prevent scaling potential on the RO membranes. Lastly, the water is pressurized into the RO system where is separated into two streams, permeate and reject streams. The permeate stream would be 99% free of Total Dissolved Solids and the reject stream consists of the concentrate of contaminants.

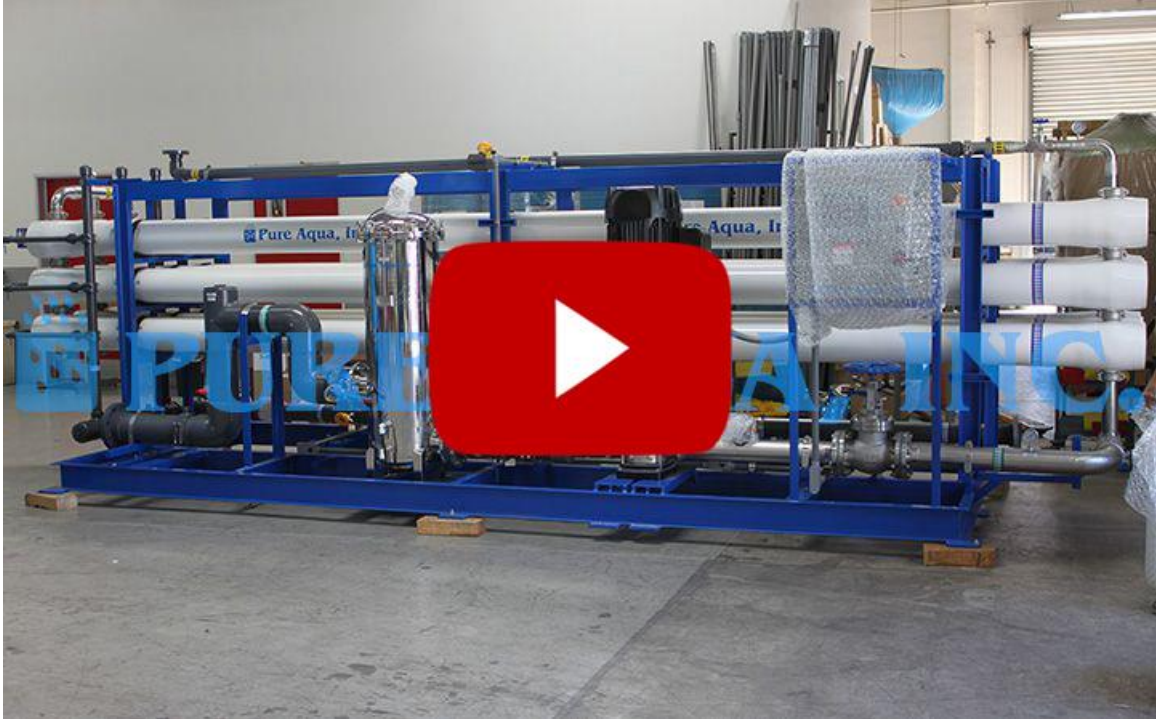
## Applied System

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The **#TW-360K-9680** RO system was provided from our **RO-500 Series**.

## Project Video

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## Features

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- (9) FRP pressure vessels (Codeline rated at 300 PSI)
- (54) 8" TFC spiral wound membranes (Hydranautics ESPA2-LD)
- GF conductivity sensor on product line
- Low- & high-pressure switches
- (2) Flow meters for reject and product line
- High pressure pump Grundfos CRN90
- Variable frequency drive to control the pump speed
- 5-micron pre-filter with SS housing (SSC-88-316)
- PLC control panel (Siemens S7-1200)

## RO-500 Series Product Video

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To learn more about our RO-500 Series product, watch this video!



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