

A Discussion of Reverse Osmosis Treated Water vs. Municipal Water in Newspaper Printing: Pros and Cons

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R.O. Pros

- ▶ **If properly maintained, an R.O. system provides a consistent supply of press water almost completely absent of minerals (salts).**
- ▶ **Conductivity and pH remain constant.**
- ▶ **Day to day, week to week, month to month uniformity**

R.O. Cons

- ▶ **Properly maintained systems can be costly, due to the expense of softening salts, sanitizing of membranes, and replacement of membranes. This can total in the thousands of dollars.**
- ▶ **Increased water costs due to filter back flush:**
 - Rule of thumb is 4 gallons of source water to 1 gallon of R.O.
- ▶ **Corrosion: True R.O. is acid in pH and devoid of buffering salts which can stem corrosion.**
- ▶ **If neglected, R.O. systems can be the source of fungus, algae, and bacteria.**

Tap Water Pros

- ▶ **This is the least expensive. If you buy a gallon, you use a gallon.**
- ▶ **Free or low cost water analysis by your water supplier**
- ▶ **Less corrosive due to the presence of buffering salts**

Tap Water Cons

- ▶ **Expect changes in conductivity, often seasonal**
- ▶ **Expect changes in hardness**
- ▶ **Calcium and other salts can bond to fountain solution salts to form insoluble compounds**
- ▶ **These compounds can at the least, clog spray nozzle tips**



Recommendations

- ▶ **As most of the R.O. systems in our industry have become mature, to maintain them can affect overhead cost. A decision may have to be made regarding their continued use.**
- ▶ **If your municipal water is lower in conductivity and hardness (conductivity under 300 and hardness under 8-9 German hardness), it should perform fine for fountain solution use. Attention to hardness due to calcium is especially important.**
- ▶ **If you intend to switch from R.O. to tap water, provide your fountain solution supplier with a sample for analysis. They are your best source to provide insight regarding the compatibility of your water with their fount.**