

# Reverse Osmosis Economic Analysis

## Background

In 2001, Kelly A. Reynolds reported a University of Arizona study indicating that the average American between the ages of 20-50 consumes a ½ gallon of water per day. Individuals, under 20 and above 50, have a tendency to drink more.

## Water Usage

- A ½ gallon of water equates to four 16 oz glasses of water per day because there are 128 oz in every gallon.
- If a person drinks eight glasses of water per day, then they are drinking a gallon of water per day.
- Therefore, the average family of four people drinks 2 gallons per day for drinking and beverage preparation AND uses an additional 2 gallons per day for food preparation and cooking.
- As a result, the total use of water for the average family of four is 4 gallons per day.
- Four gallons per day times 265 days per year = 1,456 gallons per year for the average American family of four.

## Economic Analysis

- Beyond the normal usage, it's entirely possible that two family members may be drinking two 16 oz bottles of store-bought water per day =  $2 \times 2 \times 16 \text{ oz} = 64 \text{ oz per day}$ .
- That 64 oz per day is ½ gallon  $\times 365 \text{ days} = 182 \text{ gallons per year}$ .
- The average low-to-mid retail price range of branded drinking water is \$1.25 per gallon.
- So,  $182 \text{ gallons} \times \$1.25 = \$227.50 \text{ per year...just for bottled water}$ .
- If more family members, or if a typical family is purchasing more bottled water than this usage, then the cost per year increases.

## Economic Summary

- Average family of four consumes:
  1. 2 gallons per day of tap or bottled water for drinking and beverage preparation.
  2. 2 gallons per day of tap water for food preparation and cooking.
  3. ½ gallon per day of bottled water for drinking.
- Total usage = 1,638 gallons per year for a family of four.
- If all 1,638 gallons of water were purchased in bottled water = \$2,047.50 per year.

**Note:** The purchase of an RO system installed at approximately \$1,800-\$2,000 pays for itself in just one year and saves money every year thereafter. Other usage amounts and costs can be used accordingly to determine the "pay back" on the investment. The family will therefore enjoy the totally clean, crisp and purified water for their household use for drinking, beverage preparation and food preparation. If you're a coffee drinker, you'll just love the taste of coffee made with RO water purification!!