

OurwaterQuality

Drinking-water options

There are a number of viable options for improving the quality of drinking water in your home and office. If you are concerned primarily about flavor, consider one of the relatively inexpensive carbon-filter systems (carafes, faucet-mounted filters, countertop filters or in-line undersink filters). If contaminant removal is your primary objective, the most practical and efficient choice is an under-counter reverse osmosis (RO) system. Although distillation systems produce the highest quality of drinking water, their high energy consumption makes them rather impractical.

With RO you also bypass the environmental and carbon-footprint issues associated with plastic bottle usage, transportation, and recycling. Forty percent or more of all bottled water, both in personal-sized bottles or delivered in bulk to your home, is municipal water processed by reverse osmosis.

When selecting a reverse-osmosis system, look for certification by the

National Sanitation Foundation International (www.nsf.org) to ensure materials quality, system performance and contaminant reduction. You should be aware that the NSF logo may only apply to a single component part of the unit. It is best to verify certification for the specific unit you are considering on the NSF website under Drinking Water Treatment Units.

The website also serves as a useful guide for what RO systems will and will not remove. They will remove a variety of ions and metals as well as some bacterial contaminants (cysts), but not coliform bacteria. RO systems will remove arsenic V but not the more toxic arsenic III. RO is well documented in the literature and in post-treatment testing to be effective in removing uranium, but NSF does not certify for uranium reduction. With complex well chemistry, RO is commonly used in tandem with other systems to set up a series of barriers for contaminant removal.

One criticism of reverse osmosis-filtered water is that it is stripped of essential minerals. However, most consumers do not depend on water for their nutritional needs but elect to take vitamin supplements or re-mineralize their RO water. Savvy water-treatment companies use a crushed limestone (calcite) post-RO filter to impart a pleasant taste to the water. Parents sometimes express concerns that RO removes the fluoride that is added to municipal water for dental health purposes. This is true, but water fluoridation in general is a controversial issue and today most children under professional dental care receive whole-mouth fluoride treatments.

The most valid criticism of RO is that up to five gallons of water are rejected for every gallon of purified water produced. Actually, many inexpensive, non-certified ROs have much higher rejection rates, are extremely wasteful and still do not deliver verifiable contaminant reduction, which



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is the primary reason for using reverse osmosis. While reject water is routed to the drain, it is not “lost” but re-enters the hydrologic cycle. In many cases, the RO reject water may be collected and redirected for irrigation purposes.

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HomeequityAdvantage

PMI makes a comeback

In mortgage lending, private mortgage insurance (PMI) traditionally has been required when a borrower puts down less than 20 percent on the purchase of a home. PMI protects the lender from default by providing sufficient insurance to cover the amount of the loan. If a borrower has less than 10 percent to put down on the property, PMI can be a fairly expensive addition to the monthly mortgage payment.

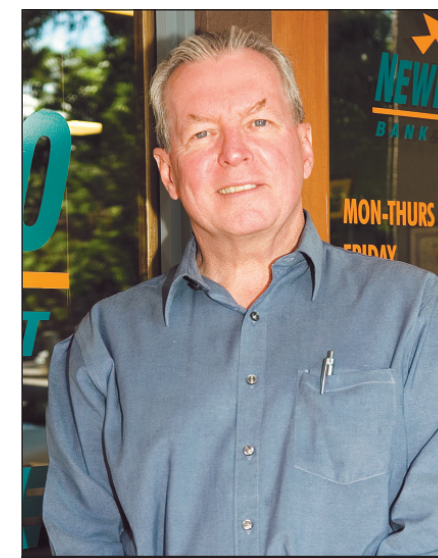
A popular method to avoid PMI has been to provide a borrower with an 80 percent first mortgage and putting behind that a second mortgage with a higher interest rate, but on a smaller amount, to cover the balance of the loan. This made the monthly payment less costly than the PMI bill. It worked well until the growing recent surge of foreclosures across the nation began to scare investors who secured these second mortgages. If the property went to foreclosure, the holder

of the second mortgage was unlikely to recoup the money loaned. To compensate, the interest rates on second mortgages have soared to levels that currently make PMI the vehicle of choice when the loan-to-value is greater than 80 percent.

The rising foreclosures represent a moment of serendipity for the PMI companies. To compensate for the loss of business caused by the rejection of PMI in favor of second mortgages, the PMI companies were successful in bringing about federal legislation for 2007 that allows a tax deduction on the monthly PMI payment, but with restrictions: the deduction is only good for loans initiated in 2007, is deductible only for tax year 2007, and only applies to households with adjusted gross income of \$100,000 or less.

As a borrower in need of PMI, be aware of a few conditions that may vary with Fannie Mae, Freddie Mac, and other investors but generally speaking have

universal mortgage application. One, PMI will automatically terminate when the principle balance of the loan is *scheduled* to reach 78 percent of the original value of the property. This would be many years away. Two, PMI termination can be *requested* by the borrower when the balance *actually* reaches 80 percent of the original property value. This means that you need to have the property appraised by an appraiser selected by the lender. The request must be in writing, you must be current on the loan payments, and you must have a “good payment history.” There is a big hook here. “Good payment history” means no payments 60 or more days past due within two years, and no payments 30 or more days past due within one year of the later of (a) the cancellation date or (b) the date you submit a request for cancellation. In order to show that you have no late payments for two years, you would have to have the loan for two



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years, and this is the usual seasoning requirement. You can not get rid of PMI for at least two years. This requirement can be waived only if the borrower has made improvements on the property that have increased its value.

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