

The Water Awareness Committee of  
Monterey County presents . . .

# Water Is Life

**Water Hotline (831) 646-4656 • [www.waterawareness.org](http://www.waterawareness.org)**

A Question-and-Answer  
Guidebook for  
Monterey County  
Water Users

## Learn More About

- Water Costs
- Water Supply
- Water Quality
- Water Resources

## **WAC Members**

**Association of Monterey Bay Area Governments (AMBAG)** is a voluntary association of cities and counties in the Monterey/San Benito/Santa Cruz county area. The Association was founded to serve as a forum for discussing and making recommendation on issues of regional significance, including transportation, air quality, and water quality. (831) 883-3750 [www.ambag.org](http://www.ambag.org)

**California-American Water Company** provides water service to Carmel, Del Rey Oaks, Monterey, Pacific Grove, Seaside, Sand City and adjacent parts of the county. (831) 646-3200 [www.calamwater.com](http://www.calamwater.com)

**California Water Service Company** provides water service to Salinas, Las Lomas, Las Palmas, Oak Hills, Toro Park, and Indian Springs. (831) 757-3644 [www.calwater.com](http://www.calwater.com)

**Marina Coast Water District (MCWD)** provides water distribution and wastewater collection to the service area encompassing the City of Marina and to the former Fort Ord. (831) 384-6131 [www.mcwd.org](http://www.mcwd.org)

**Monterey County Health Department's** mission is to fulfill government's role in protecting, promoting, and improving the health of the communities and the people of Monterey County. (831) 755-4507

**Monterey County Water Resources Agency** manages, protects, and enhances the quality and quantity of water and provides specified flood control services to Monterey County. (831) 755-4860

**Monterey Regional Water Pollution Control Agency (MRWPCA)** treats and recycles wastewater for crop irrigation from many northern Monterey County communities. (831) 372-3367 [www.mrwPCA.org](http://www.mrwPCA.org)

**MCSI Water Systems Management** provides management, operations, and consulting services for small water systems up to 200 connections along the central coast. (831) 659-5360 [www.gowatermanager.com](http://www.gowatermanager.com)

**Monterey Peninsula Water Management District's (MPWMD)** mission is to manage, augment, and protect water resources for the benefit of the community and the environment on the Monterey Peninsula. (831) 658-5601 [www.mpwmd.dst.ca.us](http://www.mpwmd.dst.ca.us)

**City of Salinas** The City of Salinas provides planning, development, and maintenance pertaining to water resources for its citizens and businesses, as well as assuring protection of the environment with every new project. (831) 758-7237 [www.ci.salinas.ca.us](http://www.ci.salinas.ca.us)

*Assisting the members in the preparation of this guidebook is the **California Rural Water Association** (800) 833-0322, and Diana Cornell and Silvia Burnett, Spanish translation.*



## Water Awareness Committee of Monterey County

### To Monterey County Water Lovers:

We all love it. We love to drink it. We love to grow things with it, wash in it, swim in it, sail on it, hear it falling, watch it rushing by. It creates our wealth, our recreation, and sustains our very lives. WATER IS LIFE!

In 1991, the WATER AWARENESS COMMITTEE OF MONTEREY COUNTY, INC. was formed “to promote personal responsibility through education for the conservation and beneficial use of water in Monterey County.”

In practice, we serve as a link with our communities, water agencies, and the water industry. We provide educational programs for children and adults. And, we attempt to effect changes in water-use behavior by raising awareness of water resources and conservation. Our members contribute their time, talent, and resources to this non-profit, public-benefit organization. We welcome new members and public input.

Throughout history the understanding and intelligent use of water has sustained all successful communities. We have only to look back a few decades to the “dust bowl” and destruction of a great part of our society to understand how poor planning and neglect can directly affect our lives. When it comes to protecting and conserving our water, each of us can make a difference.

Sincerely,

Russell L. Hatch, Chairman

Water Awareness Committee of Monterey County, Inc.

A handwritten signature in black ink that reads "Russell L. Hatch". The signature is written in a cursive style with a large, sweeping 'R' and 'H'.

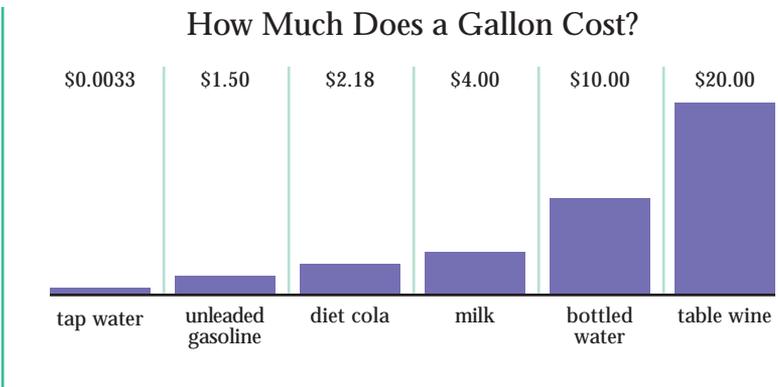
# How Much Does Our Water Cost?

Water has always been one of our least expensive utilities. But, no matter where our water comes from, the costs to retrieve it, store it, treat it to make it drinkable, and maintain the pipelines needed to distribute it are increasing.



- Costly electricity powers the pumps that deliver the water to our homes.
- Complying with more complex water-quality regulations and developing new water supplies will cause future costs to increase.
- However, reducing demand can help to control the costs of water and prevent the need for rationing.

Water is a real bargain. Shop and compare!



*Water is precious and should be treated as such. However, it's also a very affordable liquid when compared with others we use every day.*



# Is Our Water Safe?

The California Department of Health Services and the Environmental Protection Agency have established high quality standards for drinking water, and your water company must comply with these standards. The standards for drinking water are more strict than the quality standards for any other item we eat or drink. If you get your water from a private well or other unregulated water supply, you must take responsibility for testing your water to ensure its safety.

## What can affect the quality of my water?

### **Some contaminants are unpleasant, but not necessarily a health hazard.**

- Minerals can make it hard, discolored or have an “off” taste.
- High levels of iron or manganese can stain fixtures and sinks.
- Suspended air bubbles can make it milky.
- High sulfur content can make it smell like rotten eggs. Improperly maintained water heaters can cause rotten-egg odors, too. Contact your plumber.
- Seawater intrusion can make it salty.

### **Some contaminants can be unhealthful.**

- Nitrates are dangerous for infants and expectant mothers. If you are notified that your water is high in nitrates, do not drink it. Boiling will not make it safe, but it will concentrate the nitrates.
- Arsenic may cause circulatory problems or cancer.
- A positive coliform bacteria test is an indication of problems in a water system. Coliform bacteria may cause illness.
- Call the Health Department at (831) 755-4507 if you have questions or concerns.

### **Adding fluoride and chlorine can benefit you and your water system.**

- Research has shown that fluoride reduces cavities in both children and adults.
- Chlorine is an effective disinfectant for emergency use in small water systems

# How Do We Deal With Water Emergencies?

## During a Water Outage. . .

Minimize usage. Add water from the pool or spa to the toilet tank to flush.

Prepare by storing water. Add 8 drops of household bleach per gallon, store in a plastic container, and use within one year.

## After an Earthquake. . .

Check for leaks.

## To Fight Fires. . .

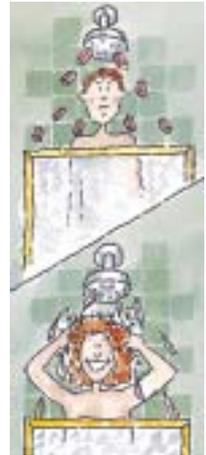
Use water from pools or spas. Keep hoses connected for quick response.

## To Purify Water. . .

Boil vigorously for five minutes, use water purification tablets, or add 8 drops of household bleach per gallon. Do not use chlorine products designed for a pool or spa.

## To Solve Pressure Problems. . .

Call your water company. Consider installing a pressure regulator on the main line which enters your home.



## HELPFUL TIPS

**Prevent an Emergency!** When you go on vacation, turn off your washer valves. Don't leave them pressurized.

**Be Safe!** If there is a question about contamination, call your health department. Chlorine bleach added to water disinfects it. Or, boil it for five minutes before drinking.

**Be Aware!** In case of certain short-term emergencies, your water purveyor may truck in water from outside water supplies to storage tanks .

**Be Prepared!** Find a shut off valve for your property. If there is not one on your side of the meter, have one installed.

# Where Does Our Water Come From?

Groundwater is stored beneath the surface of the land, filling the spaces between the soil, rock, and clay. These naturally occurring water storage areas are called aquifers.

Our underground aquifers are not able to meet the demand for all our needs. We have therefore built dams and other reservoirs to collect and store surface water. For a variety of reasons, we have not been able to construct adequate additional storage (dams, reservoirs, and water tanks) to keep up with demand.



*Dams and reservoirs are designed to collect and store surface water.*

## Are we overdrafting our aquifers?

In an overdrafted aquifer, water has been removed faster than nature can replenish it. Many aquifers in Monterey County are overdrafted. In fact, the State Water Resources Control Board tells us that the Carmel River Resource Area is seriously overdrafted by 10,400 acre-feet annually. The State says we must find a new source for 58% of the water historically taken from the Carmel River aquifer.

North County aquifers are overdrafted up to 200% and other areas in the Salinas Valley are also seriously overdrafted, causing water quality and quantity problems.

## Consumer Confidence Reports Are Now Required

Water companies are required to inform their customers about the results of the water tests they perform. Once a year, prior to July 1, they must include information about the test results in a Consumer Confidence Report. The reports are mailed to customers or included as a bill insert. Call your water company if you need a copy.

*The three main aquifers underlying the Salinas Valley are at 180 feet, 400 feet, and 900 feet below the surface.*

*Water from deep aquifers is more reliable than surface water. Surface water for drinking must be treated.*

*Surface water contamination comes from pesticide overspray, chemical spills,*

*95% of water used in Monterey County is groundwater.*



*Reservoirs at the San Clemente and Los Padres Dams on the Carmel River; the San Antonio Dam on the San Antonio River; and the Nacimiento Dam on the Nacimiento River are our main above-ground water storage facilities.*

*Water in these reservoirs is released into their rivers during dry months to “recharge” the aquifers in the ground below the rivers.*

*90% of the groundwater withdrawn in Monterey County*



# From What Other Sources Do We Get Water?

## Aquifer Storage and Recovery

During wet periods, water from rivers can be injected into depleted aquifers, using them as vast underground storage basins. During dry periods, this water can be pumped out for all uses.

## Bottled Water

Portable and popular, bottled water can cost up to \$10.00 per gallon. However, the Environmental Protection Agency's standards for drinking water served by water companies are more stringent than the Food and Drug administration's standards for bottled water.

## Desalinization

Desalinization is the conversion of salt or brackish water to drinking water by reverse osmosis.

*Membrane filters make reverse osmosis filtering possible.*



## Graywater/Cisterns

Water salvaged from rainfall and other uses can be treated for limited reuse.

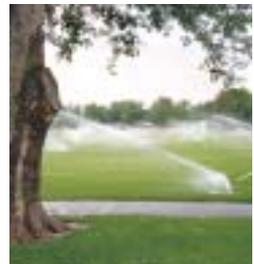
*Many industries, car washes, and irrigation systems use graywater.*



## Recycled Water

Wastewater and sewage from homes and businesses is taken through three stages of treatment to create water that is pure enough to irrigate food crops, green belts, and turf (mainly golf courses).

*Recycled water can be used for irrigation.*



## How Can We Get More Water?

Enough rain falls on Monterey County and the technology exists to treat, store, and deliver this water to everyone who needs and wants it. However, storage, distribution, and environmental concerns mix with other issues to bring water to the center of many political debates. To some, limiting water supplies is the answer to avoiding negatives associated with growth. To others, limiting supplies harms our quality of life. This is a classic human and community paradox.

As a practical matter, the State of California Water Resources Control Board is telling both the Monterey Peninsula and the Salinas Valley that their water supplies are in serious need of augmentation. Limits are being imposed by the State Water Resources Control Board that will affect everyone.

Many areas get around these issues by importing water from water-rich areas. In Southern California, many areas survive solely on imported water. Certain areas in Monterey County are considering importing water as one option to augment water supplies.

*To slow seawater intrusion, 12,000 acres in northern Monterey County are irrigated with recycled water.*



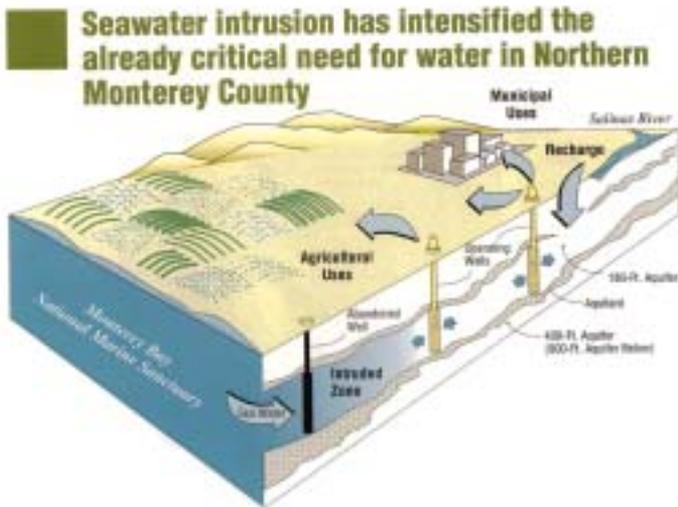
# What Problems Face Us?



*The waters of the Pacific Ocean are contaminating some aquifers in Monterey County at an alarming rate.*

## Seawater Intrusion

Seawater intrusion happens when we draw more water from aquifers than is recharged by surface water from rainfall. Today, the coastal aquifers are contaminated with seawater to varying degrees, which limits aquifer storage capacity. Many urban and agricultural areas are impacted—and the intrusion of seawater is advancing!



## Hazardous Materials

Hazardous materials can enter into our aquifers by improper waste disposal and leaky underground storage tanks. Millions of dollars are being spent to replace and update leaky single-walled tanks that have caused fuel and fuel additives, such as MTBE, to seep into our water supplies.



## MTBE

The addition of MTBE, methyl tertiary butyl ether, into our gasoline was a well-meaning attempt to curtail air pollution. However, MTBE is a serious water contaminant. MTBE is being phased out in favor of safer fuel additives. Many communities need to test their water for MTBE.

## Nitrate Contamination

Nitrate contamination comes from sources including septic systems, feedlots, fertilizers, and wastewater effluent. Nitrate “plumes” can travel in confined underground aquifers and contaminate wells miles away from their source. High nitrate levels can impact drinking water supplies and crop production, including grapes and cauliflower. Many municipal wells in the Salinas Valley have been removed from service due to excessive nitrate contamination.

## Dissolved Minerals

Naturally-occurring toxic minerals include arsenic, fluoride, radon, lead, copper, and asbestos. Calcium and magnesium, although not toxic, cause hardness; iron and manganese stain clothes and fixtures.



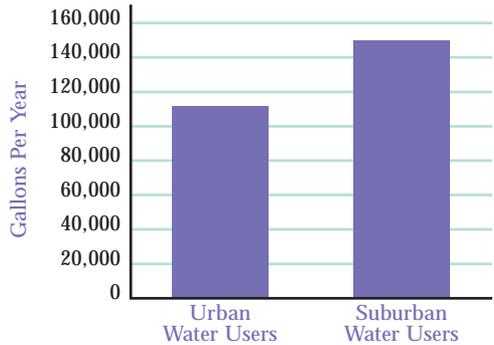
*High concentrations of dissolved minerals cause health concerns, hardness, and staining.*

# What Else Do We Need to Know?

## How much water do we use?

The average urban household uses about 112,000 gallons of water per year. Suburban households tend to use more because of outdoor irrigation.

## How Much Water Do We Use?



## What's the best way for suburban and rural water users to conserve?

Xeriscape gardening means planning and maintaining a landscape of native low-water plants. Visit your local nursery or greenhouse to find out more about Xeriscape gardening in Monterey County.



## What about lawns and gardens during the dry season?

In Monterey County, we use more water for irrigation than for any other single use. Here are some tips for the ordinary homeowner who is trying to maintain attractive landscaping during the driest times of the year.

### TIPS

1. Water early in the morning.
2. Aerate your lawn.
3. Use mulch.
4. Remember: Deep watering once a week is better than shallow watering once a day.



# How Can We Help at Home?



## In the Kitchen. . .

- Use your dishwasher and clothes washer only for full loads. They use 25 to 35 gallons a cycle, so only turn them on when they're full.
- If you wash dishes by hand, fill your second sink or a large dishpan with clear rinse water as needed, rather than running water down the drain.
- Clean fruits and vegetables in a sink of clean water, rather than running water down the drain.

## Outside. . .

- Soap down your car or boat using a pail of soapy water, then hose only to rinse, rather than running water down the gutter.
- Water your lawn only when it needs it. If the grass springs back when you step on it, it doesn't need water.
- Drip irrigation ensures that the water you use gets right to the roots of the plants where it will do the most good. Consider installing a drip system if you have extensive plantings.
- Position your sprinklers so water lands on your lawn or garden, not on concrete or other paved areas. Water the grass, not the gutter.

## All Around the House. . .

- Check faucets, pipes, hoses, and sprinkler heads for leaks. If you find one, fix it.

**Water Awareness Committee  
of Monterey County, Inc.  
P.O. Box 3254  
Salinas, CA 93912**



**Water Awareness Committee of  
Monterey County Can Help**

**Call the WAC Hotline with your  
water-related questions.  
(831) 646-4656**

**Visit the WAC Web Site for current  
information and links  
[www.waterawareness.org](http://www.waterawareness.org)**