



*We never know the worth of water till the well is dry.*  
 ~Thomas Fuller

CRWP Spring 2015

This year winter seems to have forgotten to make a stop in our region and now we are already in spring! The good news is we are at just about average for the overall water year. However, the snowpack for our region is below average. Water conservation is always important and becomes even more so as we move into warmer, drier months. CRWP will keep you informed and continue to provide tips on water conservation throughout the season. For more indoor/outdoor conservation tips visit our website at [www.clackamasproviders.org](http://www.clackamasproviders.org)

## Drinking Water & Emergency Preparedness

If an earthquake, winter storm, or other disaster strikes our communities, you may not have access to food and water for days or even weeks. Take time now to prepare for you and your family.

The most important thing you can do is to plan ahead and have essential emergency supplies on hand.

- Having an ample supply of WATER is a top priority. At least one gallon per person per day, at least a two week supply for each member of your family. A minimum three-day supply is essential. Don't forget about your pets.
- Drink at least 2 quarts of water a day, 3 to 4 quarts if you are in a hot climate, pregnant, sick, or a child. If supplies run low, DON'T ration water: Drink the amount you need today and look for more tomorrow.
- Store water in a cool, dark place in your home, each vehicle, and your workplace. Preferably in

store-bought, factory-sealed water containers.

**Safe Emergency Water Sources:** melted ice cubes, water drained from the water heater (if the water heater has not been damaged), liquids from canned goods such as fruit or vegetable juices, or water drained from pipes.

**Unsafe Emergency Water Sources:** radiators, hot water boilers (home heating system), water beds (fungicides added to the water or chemicals in the vinyl may make water unsafe to use), water from the toilet bowl or flush tank, and swimming pools and spas (chemicals used to kill germs are too concentrated for safe drinking but can be used for personal hygiene, cleaning, and related uses).

**Water Sources Outside of Your Home:** rainwater, streams, rivers, and other moving bodies of water, ponds lakes, and natural springs.

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## Vegetable Gardening for the Water Wise

Spring is here and so is the time for planting the vegetable garden. The garden is also the perfect place to think about efficient water usage.

One of the most obvious ways to be water wise in the garden is to consider the method water is being delivered to the plants. Much of the water dispersed through sprinklers and hoses by enthusiastic gardeners evaporates before it ever reaches its intended source - thirsty roots. The two best ways to water a garden is by the use of drip irrigation and soaker hoses. These methods deliver water directly to the root zone of plants and minimize evaporation.

Drip irrigation is excellent for home use. This highly efficient watering method consists of a system of nozzles that deliver small quantities of water at low pressure directly to where it does the most good - the root zones of plants. Drip (or trickle) irrigation can save 30%-70% of the water used by overhead sprinkler systems.

A soaker hose is a canvas or rubber hose with perforations. It is most effective when it lies on top or slightly below soil level and mulch is placed over the soil and hose. You can install the hose in the spring and leave it in place all season.

Another important consideration is when to water. Heat and wind cause water to evaporate more

quickly. By watering early in the morning, when the air is calm, evaporation is kept to a minimum, and results are the best. Watering in the evening is the next best.

Mulch and compost are two other components that can help conserve water. Mulch can serve as a ground cover that reduces water evaporation from the soil and reduces the number of weeds that would otherwise compete with the plant for available soil moisture. Peat moss, composted leaves (leaf mold), composted manure, composted kitchen vegetable scraps and grass clippings will all improve soil structure and enhance moisture-retaining capabilities.

### Additional Water Saving Techniques

**Plant** in blocks, rather than rows. This creates shade for roots and reduces evaporation.

**Control** weeds that compete with vegetables for water.

**Group** plants with similar water needs in the same section of the garden for easy irrigation. Cucumber, zucchini, and squash, for example, require similar water applications.

**Protect** plants and soil from wind with windbreaks to reduce evaporation.

The Clackamas River Water Provider members work very hard every day to bring their customers clean, safe and reliable drinking water. There are a many different people holding various positions, coming from all walks of life working together in order to make this happen. Recently we interviewed Kevin McCaleb. He is the City of Lake Oswego's Water Conservation Coordinator.

### Where do you work/who do you work for?

Kevin: I work for the City of Lake Oswego; my office is located in the City Hall building in downtown Lake Oswego.

### How long have you been working for "The City of Lake Oswego"?

Kevin: I started working for the City in 2007.

### What is your position?

Kevin: I am the City of Lake Oswego's Water Conservation Coordinator.

### How did you acquire your position?

Kevin: I was living and working in Arizona and always thought I would try to get back to the Pacific Northwest where I grew up. I saw the opportunity being offered in Lake Oswego and took a shot at it.

### How did you get into Water and Water Conservation?

Kevin: I grew up on a farm in Eastern Washington. My whole life I saw people using tons of water every day, whether they needed it or not. The mentality was always "use the water or lose the water." Eventually I started working in the agriculture side of the irrigation industry and after a stint in the Army began working in the commercial and residential side of the business. I worked for property management organizations and eventually started working for some general contractors in the area doing installations.

I began learning about the different plants and soils and how they relate to and affect water. I discovered the Irrigation Association and continued adding to my irrigation expertise by obtaining certifications from and through them.

While working for the Denver Zoo, I developed



an irrigation system that would minimize air released during startup. That hissing and whistling sound often would startle some animals when it turned on during a cycle. When I discovered that the Zoo was using as much water as the Denver Airport. I developed new maintenance practices and procedures for the irrigation systems to make them more water efficient. I taught maintenance staff and animal keepers new techniques to use, developed and installed a biologically self-cleaning exhibit that would become the prototype for future exhibit water features.

Eventually I moved to Arizona and the Town of Oro Valley. While in Arizona I worked with the Sonoran Desert Museum, the City of Tucson and the University of Arizona. I learned about the Sonoran desert soils, plants and the deserts unique natural rainfall cycle. I also learned an important lesson: Regardless of where you live, managing what you have is the key. You can't really save water, but you can take care in how you use it and can even get more than one use out of it before you let it go.

### What is your favorite/ least favorite part of your job?

Kevin: My favorite part of what I do is educating the public about their water and their water use. I really enjoy working face to face with the public. The best part is when people have that "Ah ha moment" about their water.

My Least favorite is what I term "The Good Idea." People will jump on the latest craze of "sustainable" or "Green" regardless of whether or not it is even effective or if it's even practical. Just because it sounds right, doesn't make it so. There is no one size fits all and

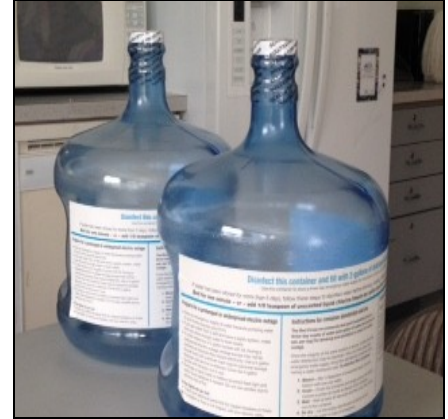
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## Drinking Water & Emergency Preparedness (cont.)

**Water Treatment** - treat all water of uncertain quality before using it for drinking, food washing or preparation, washing dishes, brushing teeth, or making ice. There are many ways to treat water. None is perfect. Often the best solution is a combination of methods. Before treating, let any suspended particles settle to the bottom or strain them through coffee filters or layers of clean cloth.

**Boiling:** Boiling is the safest method of treating water. Bring water to a rolling boil for 1 full minute, keeping in mind that some water will evaporate. Let the water cool before drinking.

**Chlorination:** Use household liquid bleach to kill microorganisms. Use only regular household liquid bleach that contains 5.25 to 6.0 percent sodium hypochlorite. Do not use scented, color safe, or bleaches with added cleaners. The potency of bleach diminishes with time, use bleach from only newly opened or unopened bottles. Add 16 drops (1/8 teaspoon) of bleach per gallon of water, stir, and let stand for 30 minutes. The water should have a slight bleach odor. If it doesn't, then repeat the dosage and let stand another 15 minutes. If it still does not smell of chlorine, discard it and find another source of water.



**Distillation:** Distillation will remove microbes (germs) that resist boiling and chlorination as well as heavy metals, salts, and most other chemicals. Distillation involves boiling water and then collecting only the vapor that condenses. The condensed vapor will not include salt or most other impurities. To distill, fill a pot halfway with water. Tie a cup to the handle on the pot's lid so that the cup will hang right-side-up when the lid is upside-down (make sure the cup is not dangling into the water) and boil the water for 20 minutes. The water that drips from the lid into the cup is distilled.

For more information on Emergency Preparedness, visit our website at [www.clackamasproviders.org](http://www.clackamasproviders.org) or check out the following web links:

[Fema.gov](http://www.fema.gov) offers excellent advice for utilizing water supplies in your home from your water pipes, water heater and other sources and how to safely treat water. [FEMA Guide on Food and Water in an Emergency](#)

[Red Cross](#) – good information on how to prepare for an emergency and what you should have on hand.

[www.ready.gov](http://www.ready.gov)

<http://www.fema.gov/plan/index.shtm>

### Clackamas River Water Providers Annual Calendar Contest

The theme for the 2016 calendar "Our 1%" is based on our planet earth which is 71% covered with water. 97% of that water is sea water, the remaining 3% is fresh water and 2% of the fresh water is frozen and unavailable. Only 1% of the earth's fresh water is available for sustaining life.

This year we had 13 classes from 11 different schools participate in the contest with close to 400 entries. Thirteen pictures have been chosen to be in the calendar, one for each month and one for the cover. Help us choose which picture will be the cover by visiting our website and voting for your favorite picture. The picture with the most votes will be on the cover. Go to [www.clackamasproviders.org](http://www.clackamasproviders.org), put your cursor on the Conservation Tab, choose Water Calendar, and follow the directions to place your vote. Voting will end Friday, May 8th, 2015 at 5pm. The winner will be announced on the website Monday, May 11th, 2015.

In October 2015 the calendars will be available to the public and each school that participated in the contest will receive 125 calendars to give away to students and families or to use as school fundraisers. For more information on voting for the 2016 calendar cover picture, the winner of the contest, and where you can get your 2016 Water Conservation calendar, visit our website at [www.clackamasproviders.org](http://www.clackamasproviders.org) or give us a call at 503-723-3511.

when it comes to management, every little bit helps. Proper management of water affects us all, big or small; whether we are managing what, and how much we are consuming, or throwing it down the drain.

### **Do you plan to retire from the City of Lake Oswego?**

Kevin: I would like to finish out here at Lake O. We've done some really good things, but there is always more to do. On my first day on the job I received the article in the Willamette weekly that listed some of the high water users in the area. I believe they referred to them as hydro hogs. The city of Lake Oswego has really done good work to remove that moniker. We have really stepped up in our management. Now many folks in the region come to us for help. The City has some great examples to show people about how to maintain a beautiful yard and be efficient with their water. The things that have been accomplished here since I started are a real testament to Lake Oswego residents and the City of Lake Oswego staff and management.

### **What accomplishments are you most proud of in your career?**

Kevin: I don't really have any one accomplishment that comes to mind. I really enjoyed working at the Denver Zoo, that was a great experience, and making the Lake Oswego Storm water management videos with my dog was a lot of fun too.

Having the opportunity to work with and educate such a large and diverse group of people, and working with the Regional water Providers Consortium and its members. And last, but not least being an Irrigation Association (IA) accredited instructor and having the opportunity to educate on a national level.

### **What would you like the public to know about their drinking water and what your role does to deliver that?**

Kevin: It seems a shame to use "finished" water outside on our plants and lawns? I wish we could examine other alternatives. I would like the public to really try and understand the process and what it takes to make and deliver high quality drinking wa-



ter.

### **What can the public do to help make your job easier?**

Kevin: I would like them to please understand I can't fix the water rates; I can only help them deal with the effects.

### **What would you say H2O is to you?**

Kevin: Water is not just a job, it's my life. I really enjoy all of the folks I work with because they feel the same way about their careers in water.

### **What do you do for fun when you're not working?**

Kevin: I play music in the band "Running with Scissors." I play the guitar and sing. I like to bird hunt, and I will go fishing for almost anything, but steelhead fishing is my favorite.

Kevin left us with a few quotes that he feels are important things for all of us to think about when it comes to our water; "Water management is not about doing without, it's about doing well with what you have."

\* While the City of Lake Oswego is a member of the CRWP, Lake Oswego has their individual water conservation program separate from the CRWP Program.

## CCC Demonstration Garden

CRWP Spring 2015

Clackamas Community College (CCC), South Fork Water Board, the Regional Water Provider's Consortium, and partners in the green industry joined forces to create the Water Efficient Demonstration Garden at CCC's Oregon City campus.

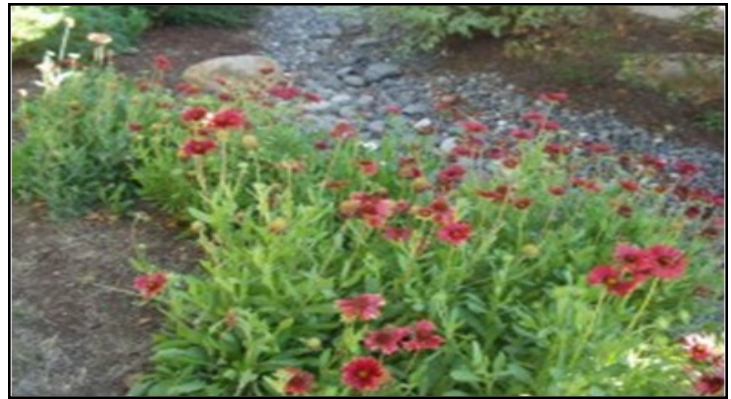
The garden is a model garden for the Portland metro region to teach the general public about several issues related to low water use landscapes – soil enhancements, the right plant/right place, selection of low water use plants, mulching, maintenance, and efficient irrigation practices.

**Take a self-guided tour of the 7,000 sq ft garden.**

Located at:  
19600 South Molalla Avenue  
Oregon City, OR 97045.

The garden is at the end of the parking lot and open to the public seven days a week, any time of day.

For more information visit our website at [www.clackamasproviders.org](http://www.clackamasproviders.org)



## CRWP Pop Quiz

1. How many gallons of water per person should be stored for an emergency?
2. How many drinking water treatment plants are on the Clackamas River?
3. What is the best time of day to water outside plants and lawn?
4. In an emergency, name 2 safe sources of drinking water.
5. On average, how many gallons of water per minute does a garden hose use?

- Answers:
1. At least one gallon per person per day, a minimum three day supply is essential.
  2. There are five drinking water treatment plants; Estacada, Clackamas River Water, North Clackamas County Water Commission, South Fork Water Board and Lake Oswego.
  3. Early morning, before 10am is the best time to water. Melted ice, water drained from the hot water heater if the heater has not been damaged.
  4. On average a garden hose uses 3.5 gallons per minute, which is 210 gallons an hour.

