



SAN GABRIEL VALLEY WATER ASSOCIATION

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Join the Challenge!

San Gabriel Valley Residents are Urged to Help Preserve Groundwater Supplies Through Weekly Groundwater Reading Announcement

On October 10th, the San Gabriel Valley Water Association launched a water conservation awareness effort that publicizes the groundwater level on a weekly basis. The goal of the effort is to raise awareness of the need to protect the San Gabriel Valley's water resources and communicate to the public the importance of viewing solutions to the drought as a community effort.

The effort includes the weekly release of a "PASS" grade when water usage falls below that of the same time last year and an "ALERT" grade when water usage exceeds that of the same time last year. Since these announcements are close to "real time," SGVWA decided to incorporate the use of a "CAUTION" to express emerging trends in groundwater levels. To track progress, San Gabriel Valley residents are encouraged to visit www.sgvwa.org and subscribe to weekly updates.

In January, Governor Jerry Brown issued a statewide emergency drought declaration urging Californians to conserve. From January onward, the state has received minimal rainfall. Although predictions of a wet "El Niño" did bring some hope of alleviating a portion of California's dry spell, those predictions will likely not materialize. Instead, each Californian will have to do their part to continue conserving. We hope that San Gabriel Valley residents will "Join the Challenge" and not only meet but exceed conservation goals.

For information about the drought, SGVWA's conservation effort, water saving tips and resources, please visit www.sgvwa.org.



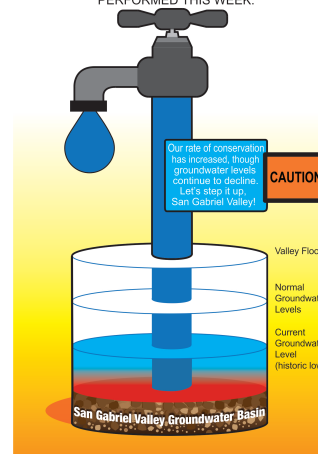
**SAN GABRIEL VALLEY
WATER ASSOCIATION**

MAKE THE CUT

Take the challenge

Please help preserve our local groundwater supply and join the San Gabriel Valley community in meeting this year's conservation goals. The groundwater level will be analyzed weekly to track our progress and a PASS, ALERT, or CAUTION will indicate our level of success. Please go to www.sgvwa.org for water saving tips and resources.

THIS IS HOW THE SAN
GABRIEL VALLEY
PERFORMED THIS WEEK:



Where Do We Get Our Water From?

Poll after poll indicates that most Southern California residents do not know where their water comes from. California's drought, however, has raised awareness that water is currently scarce regardless of its origin. This presents an opportunity for water suppliers to educate their customers. This article is intended to help residents understand where their water comes from and what impacts water rates.

Sources of Water

Bay Delta: Sacramento River-San Joaquin River Bay Delta (The Delta) is where the two rivers from the Klamath and Sierra Nevada Mountains merge. Up to 50% of the water used in California comes through the Delta from the Sierra Nevadas. Approximately 30% of the Delta's water travels to Southern California under normal conditions (1.8 million to 2 million acre-feet). This is the San Gabriel Valley's most expensive source of water because it must travel 400 miles to get here.

What the Public Needs to Know: In the past, when the weather was dry in Southern California, water from this source was used to help replenish the groundwater basin in the San Gabriel Valley. With drought plaguing the entire state, groundwater replenishment with Bay-Delta water has been curtailed. Water from the Delta is also higher in organic compounds making it more costly to treat and disinfect.

Colorado River: Water from the Colorado River is divided among seven western states including a number of water districts and tribes. This supply is brought to the San Gabriel Valley via a 242-mile aqueduct operated by the Metropolitan Water

District of Southern California (MWD). In normal years, this source comprises about 30% (550,000 acre-feet) of Southern California's needs.

What the Public Needs to Know: For more than a decade drought on the Colorado River System has reduced supplies to our region. In 2003, Southern California's share of Colorado River water was recalculated and reduced and that portion now goes to other states. During this dry period some years have been better than others. The water from the Colorado River System, though, is higher in salts than other sources. This makes it less viable for long-term basin replenishment.

Local Groundwater Supplies: Under normal conditions, local snow and rain captured from the San Gabriel Mountain range provide about 80% of the local supply for the San Gabriel Valley. As the water travels down the San Gabriel River it is diverted to spreading basins that allow the water to percolate underground. With drought affecting the Bay Delta and the Colorado River, the last line of defense against the drought is our local groundwater basin. In dry years we pull the basin reserves down and refill the basin with local runoff.

What the Public Needs to Know: Groundwater basin levels are at an all time low. Considerable effort is being made to prevent further decline due to wasteful water use practices. Elsewhere in the state, low groundwater levels have resulted in subsidence. However, the San Gabriel Valley and the groundwater basin beneath it are comprised of sandy soils and a relatively low percentage

of consolidated material and are less susceptible to subsidence from withdrawal than areas like the Central Valley.

Looking Ahead

The drought has posed many concerns about current and future supply. However, water suppliers in the San Gabriel Valley have anticipated periods of minimal rainfall and prepared by capturing, conserving

and importing water to protect local supplies. The effective management of the Basin has helped this year's period of highest demand (the summer months). In looking ahead, conservation is key to continue to help insulate the San Gabriel Valley from the concerns other regions in California are facing. That is why the SGVWA has launched a public information effort to increase awareness for the need to protect supplies currently stored underground. ■

Understanding Native and Drought Tolerant Gardening

Regional water agencies are offering consumer incentives to replace turf with drought tolerant plants. Local water agencies can help their customers choose what, when and how to replace their lawns with drought tolerant landscapes in a manner that increases the successful establishment of the new gardens while meeting customer satisfaction. This ensures that the water savings that come with the new drought tolerant landscape remain for years to come. Customers should be aware that any successful landscape design takes time and careful planning and replacing water intensive plants and grass with native, drought-tolerant plants is no different.

The Basics

Despite what some may believe, the options for native and low-water use plants are abundant. Customers have thousands of drought tolerant and native plants and landscape styles to choose from. Over the long-term, drought tolerant and native plants can reduce not only water use but maintenance costs

as well. However, to get there, thought and work is involved.

Choosing Carefully

In determining what plants to use, customers should first consider shade conditions, geography and soil type. Water districts and nurseries offer a variety of online and published guides to help customers choose the right plants based on the geographic characteristics of the home. Note that it is important to avoid planting invasive species which have the potential to degrade native habitat and increase the risk for flood and fire. *The California Invasive Plant Council* is a great place to learn more. Customers should be encouraged to take a soil sample to their local nursery to determine if their property has clay soil that does not easily absorb water, sandy soil that lets water run through quickly, or loam (a mixture of clay and sand) which has better absorption. This is an important factor to consider because, for some plants, wet or dry soil can promote rotting roots. Secondly, customers should determine

where plants will be placed on the property and look for plants that are suited to sunny or shady conditions. Some plants prefer a mixture of sun and shade.

The Ideal Season for Planting

Fall is the best time to plant drought tolerant and native plants. Late spring and summer planting in the San Gabriel Valley inhibits the establishment of strong roots. In fact, many native and drought tolerant plants treat the summer as their dormant period and planting during this time increases the failure rate and the chance that they would be overtaken by heat. Planting in the fall gives new plants the benefit of shorter days, cooler weather and, if we are lucky, rain which would help them become more established before the heat of the summer.

Maintenance and Proper Watering

Essential to a successful drought tolerant and native garden is proper maintenance. This begins with a proper ground cover such as mulch to prevent weed growth that compete with the new plants for water. Many landscapers recommend two to three inches of mulch. Without mulch or other suitable groundcover,

weeding may become a major chore. Proper pruning early in a plant's life will promote desired growth to suit the customer's chosen landscape style. Print and electronic guides at **bewaterwise.com** can help customers learn the right pruning techniques in order to prevent disease. For many native plants, pruning is best done during the summer which is their dormant period.

Making sure that new plants are properly watered in their first year or two is essential for the establishment of their roots. Drought tolerant and native plants do best with deep watering so that the

roots, in effect, "chase the water down." This is best accomplished with drip irrigation. Once established, many drought tolerant and native plants cannot absorb water during the summer when they are dormant and thus water must be avoided in the summer. This may cause fungal growth that can kill a plant. The exception to this is irrigation for plants in their first to second year.

Summary

Drought tolerant and native plants, like all plants, require certain considerations for sunlight and watering. It is important to review each plant's required maintenance before planting.

Facts about Native Landscaping:

1. Like all plants, drought tolerant native plants require water in their early lives.
2. Too much water or water in the summer may kill a drought tolerant or native plant.
3. Specific plants require specific conditions: dark, light, and soil type are all important conditions that will determine what type of native plants will be suitable for existing landscape.
4. Invasive plants can transform the native ecosystem and increase the risk for flood and fire. Do your research to avoid invasive plants, drought tolerant or otherwise.

Resources for Customers

There are many resources that public and private water retailers can make available for customers interested in learning more about drought tolerant and native plants. You may consider setting up links to your website along the following banners:

1. Learning the basics: Getting Started, Plant Selection, Irrigation, Maintenance.
2. Tutorials: Landscape Design, Efficient Irrigation Systems, Plant Selection and Care.
3. Online Classes
4. Classes Near You

From basic information to in-depth learning, additional resources can be found online at:

<http://bewaterwise.com/training01.html> or by calling the Metropolitan Water District of Southern California at (213) 217-6616.

Turn-key Website Resources and Rebates

San Gabriel Valley water agencies can contact the San Gabriel Valley Water Association to obtain a website widget that keeps the public apprised of weekly water conservation progress to protect the groundwater basin. The widget, a code that you can copy and paste, can be embedded into your website by your IT or communications specialist. ■

Leak Detection and Repair

Water companies are often asked how they manage and repair water leaks. Water leak detection is important to water companies. Leaks not only waste water, but eventually add to the overall cost of water to both the supplier and the customer. Leaks may be caused by a number of reasons, including the deterioration of the pipeline itself (aging infrastructure), unnecessary high water pressure, or damage to the pipeline caused by mudslides, flooding or any such ground movement.

Customers may assume that every leak is easily and immediately detectable; however, that is not always the case. Major leaks can often be detected visually when water appears on the surface of the street or the ground. Less obvious leaks are sometimes detected following a noticeable loss of water pressure in the system. In that case, water

company employees whose expertise is leak detection and repair use specialized detection equipment to help identify the location of the leak, and repair or replace the damaged portions of the pipeline.



Even with the best of efforts, it is a reasonable assumption that on any given day, every water delivery system experiences leaks of some kind. Typically, overall water lost due to leaks is about 15 percent of total water supplies. Most water companies try to contain leaks to only about 10 percent or less of total water supplies.

What Can Customers Do To Help?

- Call their water supplier as soon as they notice a leak.
- Promptly repair leaks on their property - Any leak within the boundary of their property is the resident's responsibility. ■



How Is My Water Disinfected after a Leak?

Despite the many lengths to which water agencies go to maintain their distribution systems, including the regular programs of flushing and cleaning pipes, leaks and larger ruptures still occur. They can happen for a number of reasons but, nevertheless, the pipe and the water it carries must be made clean and safe for public use in the end. How do agencies go about doing this?

Water processed through a treatment plant receives different chemicals to kill the germs that may be present in the supply. The most common of these disinfectants are chlorine and chloramine. These disinfectants neutralize germs in the water without doing harm to the people who consume it. Their levels are highly monitored and controlled for safety and public satisfaction. After a leak or break the integrity of the system must be reestablished. The agency responsible for the particular system first caps the leak and repairs the broken pipe. Then the water and cleanliness of the pipe itself must be addressed.

After a leak, the pipe is isolated from the system

and then filled with water that contains higher levels of chlorine. This water is held in the pipe for a while, killing any germs that may be present. The highly chlorinated water is then discharged according to federal, state, and local regulations to protect the environment and adjacent water supply. This may include introducing an additional chemical to the pipe to destroy the chlorine. Likewise, depending on the severity of the break, a boil water advisory may be given or bacteriological samples may be taken until it is determined that the water delivered through the pipe is again safe to consume.

Whatever the cause may be, water leaks and ruptures are a serious issue for water agencies. Tests and measurements are done regularly to detect and prevent future issues, to save water and money, and to protect the water supply for the consumer. Anyone that observes or suspects a leak is encouraged to contact their local water company for further investigation. Water saved now will help sustain us during dry periods in the future. ■