



Water Supply FAQ

July 27, 2015

What's the latest information on water supply?

Record-low snow pack and dry weather have led to historic low river flows. That, combined with periods of record-setting high temperatures and increased demand for water, has led Tacoma, along with Seattle and Everett, to implement the first step of their water shortage response plans. The three entities are all activating their contingency plans as a precautionary measure and have joined together to ensure that the entire region is ready for a potential water shortage.

What is the Water Shortage Response Plan?

Tacoma Water has a Water Shortage Response Plan, which provides guidelines for Tacoma Water to manage water supply and demand when there's a potential or actual water shortage. The plan has four stages that may be phased in over time:

- Phase I: Advisory
- Phase II: Voluntary
- Phase III: Mandatory
- Phase IV: Emergency

What's the difference between the stages?

- The advisory stage lets customers know that there might be a water supply problem and that they may be asked to take conservation steps. We're asking customers to carefully manage their water use and make sure they're not wasting water. For its part, Tacoma Water is evaluating and adjusting operations to eliminate discretionary water use by doing things like delaying maintenance projects.
- The voluntary stage is enacted when available water sources are not expected to be enough to support normal demands and river flows. In that stage, we would encourage further water use reduction from customers along with taking steps on our end to reduce use.
- The mandatory stage is enacted when available water sources plus voluntary reductions are not expected to be enough to meet demands and river flows. Reduction or elimination of lawn watering would likely be an example of mandatory curtailment.
- The emergency stage is enacted in the event of a catastrophe, such as an earthquake.

Why is the Water Shortage Response Plan being activated now?

We are activating the plan now because we want customers to know that a water shortage may occur and they may be asked in the near future to voluntarily reduce their use. Water supply

conditions constantly change based on current and forecasted weather, customer water demand and how much rain we receive in our watershed.

What can people do to help?

We are in Phase I of the plan – the advisory stage – and Tacoma Water wants customers to know that a water shortage may occur and they may be asked to voluntarily reduce their water use, if supply conditions worsen. For now, Tacoma Water is asking customers to continue to use water wisely, which includes these actions:

- **Water early or late:** Water before 8 a.m. or after 7 p.m., which reduces evaporation.
- **Water deeply, but infrequently:** It's better to have one or two deep waterings, rather than several shallow waterings.
- **Fix leaks:** Fix obvious indoor and outdoor leaks such as at faucets, hose bibs and sprinkler spray heads. Check for less obvious leaks such as silent toilet leaks. Put several drops of food coloring in your toilet tank; after 10 minutes if you have color in the toilet bowl, you have a flapper leak.
- **Wash vehicles wisely:** Wash your vehicle(s) at locations that recycle their water.
- **Use a broom, not a hose:** Use a broom, rather than a hose, to clean sidewalks, driveways and patios.
- **Wash full loads:** Wait until your clothes washer and dishwasher are full before starting.

This is the advisory stage now. How does Tacoma Water determine whether to move to the voluntary stage?

We are monitoring the amount of water storage and flows into the Green River continuously, as well as the capacity of our groundwater supplies, the operation of pumps and equipment, and our system demands. We are coordinating with the local, state, federal and tribal agencies interested in the management of river flows and fisheries, and together making decisions to optimize the use of water resources. If the analysis of this data shows that a further reduction in demands is needed to meet the critical needs of our customers, or the river, we will move to the next step in the Water Shortage Response Plan, which is voluntary curtailment.

How much water do we all need to conserve to be in a more secure position?

This is difficult to say precisely because it depends in large part on the weather patterns that develop over the next several months and how water demands respond to that weather. We know this year we have seen unprecedented natural weather conditions. If water use follows a pattern similar to 2014, and our wells continue to perform reliably, we expect to have adequate supply. If demand reduces by even a few percentage points due to changes people make during this advisory stage, we will be in a better position.

Can customers really make a difference?

Absolutely. Simply following the advice Tacoma Water has provided for years – using water wisely – will help. Looking more closely at everyday opportunities to reduce water waste will make a meaningful difference when spread across the large population served. If additional steps to reduce water use are requested later, we'll provide more detailed information on how to do it.

What is Tacoma Water doing to stretch water supplies as far as they can go?

Tacoma Water is fortunate to have both supplies from the Green River – our typical year-around source – and groundwater wells that were once critical every single summer to meet peak demands. Since the Second Supply Project was completed, and more Green River was stored beginning in 2006, we haven't needed the groundwater nearly as much. But we have always known that there would be drought years when the groundwater would again be important, and 2015 is such a year.

We are extensively using some wells that haven't been pumped much in over 20 years, and not surprisingly, encountering some mechanical problems that require repair. Operations, engineering and maintenance personnel are working very hard to keep all supply and treatment systems available, and we're continuing to provide safe and reliable supply.

What is Tacoma Water's history with shortages, and what have been the results?

In recent times, there have been two drought years, 1987 and 1992, when water use restrictions were imposed.

- In **September 1987**, Tacoma Water agreed to limit diversions from the Green River to help slow the depletion of the water supply in the Howard Hanson Dam. We did that because of an extremely low streamflow. In October, we implemented Stage 3 of the response plan, which calls for mandatory use restrictions. Outdoor water use was prohibited, and a portion of the water supply for a major industrial customer was curtailed. By December, the supply situation was improved to the point that mandatory use restrictions were lifted.
- In **June 1992**, after a dry, mild winter and spring, Tacoma Water implemented a two-step approach to stage 2 of the plan, which calls for voluntary restrictions. At the time, water demand had surpassed 100 million gallons per day and stream flows were near record lows. All customers were asked to reduce their use by 20%. In addition, all customers were asked to follow a mandatory restriction to limit lawn and turf watering to once a week. The 20% reduction goal was not met with those restriction terms, so lawn watering was prohibited starting July 6. Supplies returned to normal in August when rainy weather hit, and restrictions were lifted.
- In **March 2005**, Tacoma Water went to stage 1 of the plan, which is the advisory stage. This happened due to low snowpack, low river flows and a dry forecast. By July 2005, sufficient rain had fallen to relieve concern, and the advisory was lifted.

From a weather standpoint, 2015 is worse than each of these previous events. Although we have lower demands today and more available supply, we have never seen such a dry year.

Tacoma Water monitors water supply carefully. What is involved with this?

We measure precipitation, reservoir storage, water consumption and more. This gives a snapshot that we review on a daily basis.

We also look at historical trends and build models that can help project demand and supply. The models are fairly complex, but we've got experience in doing them, and we also have flexibility in the water supply system. Our team is closely monitoring conditions that affect our water supply.

You mention flexibility in the water supply system. Can you talk about this? And what about fish habitat?

Tacoma is fortunate to have both the Green River and groundwater as its two main sources of drinking water. We are relying heavily on our groundwater sources this summer. We are taking several actions to maximize those resources, including activating wells that we don't typically use.

In terms of fish habitat, both the U.S. Army Corp of Engineers and Tacoma Water have stored water behind Howard Hanson Dam that they are releasing to help with stream flows for fish on the Green River. This provides protection for salmon and steelhead trout, which are protected by the Endangered Species Act.

How are the wells doing? Could the groundwater run out?

We continuously measure the depth of the groundwater in each of our operating wells and track the amount of available water in the underground aquifers. Over long periods of pumping, water levels do typically drop in wells. However, at this time we do not expect to run out of groundwater. Continued monitoring of these resources will be a factor in any decision to move to the next step in the Water Shortage Response Plan.

How does this situation affect the Green River Filtration Facility in the short-term and long-term?

This summer and fall, we are and will be filtering water, but less of our overall supply is coming from the river right now.

In an average year, Tacoma Water customers will get about 95% of their water from the Green River; that water will then go through the filtration facility. While this extraordinary weather year requires us to rely more on groundwater, filtering the Green River is the long-term solution to improved water quality.

How does El Niño figure into the water supply situation?

Forecasts show that El Niño could go into the spring of 2016. In the Pacific Northwest, this can lead to conditions that are somewhat warmer than average, with less precipitation. Tacoma Water will use any and all weather information from this year to use in models for next year to better understand what could be ahead.

Specifically, how is this year different from others?

- May was the driest May on record.
- June was the hottest June on record.
- For Tacoma Water, typical consumption in June is 64 million gallons per day. This June, it was 86 million gallons per day. That's 35% higher than normal.

- Puget Sound has seen only eight days of measurable rain since May 1, which is one-third of the typical total.
- The last rainfall of more than a half-inch was almost three months ago (*as of first week of July*).
- There are record-low inflows into the reservoir above Howard Hanson Dam due to the hot and dry weather. Weather is the biggest contributing factor that influences our water supply.

Who does Tacoma Water serve?

We have 98,590 customers:

- 92,226 are residential
- 6,364 are commercial/industrial.

We supply water directly to about 316,000 people in Tacoma, University Place, Ruston and areas of unincorporated Pierce and south King counties. We also serve relatively small areas within the cities of Puyallup, Fircrest, Lakewood and Bonney Lake. Through wholesale connections, we serve water to people in Auburn, Bonney Lake, Fife, Puyallup and parts of Pierce and King counties.

If the water supply continues to decline and the utility asks people to use less water, will Tacoma Water raise rates to compensate? If not, how will it account for the loss in revenue?

Over the last many years Tacoma Water has positioned itself in a strong financial position. We have developed reserves that will help us weather a revenue decline this year should that occur.

Why are Everett, Seattle and Tacoma making this announcement at the same time?

We're all facing similar water and weather situations – these are common issues. Everett, Seattle and Tacoma work collaboratively on a wide range of water supply, treatment and resource issues all year, every year.

Collectively, we serve close to half the state's population, and each draws its primary water supply from watersheds on the western slopes of the Cascades.

Are there increased fire risks right now? Is there enough water to fight fires?

We are seeing increased risk of fire throughout the entire region, and Tacoma is no exception. We have activated enhanced focus on patrols in the Green River Watershed and are in regular communication with the Washington State Department of Natural Resources, which regulates activities in forested areas. Within the area we serve water, we have a robust piping network designed to meet fire protection requirements, and we don't anticipate the drought conditions to affect that. In some areas of our system, development is surrounded by large forest stands; while our distribution system would likely be used to aid in fighting such a fire, it's designed to be used to protect structures, not put out forest fires. We will continue to monitor storage and pumping systems as we always do to ensure they're ready to use as intended.

Is Tacoma Water flushing mains?

For now, we continue to flush mains in order to maintain a high level of water quality for all customers. We do regularly scheduled flushing that cleans out pipes in large areas of the system, and we have flushing that keeps water fresh in pipes that are at dead-end points in the system. If additional conservation is needed, the regularly scheduled neighborhood flushing may be reduced, but the flushing to keep fresh water available to customers will be continued.

Is Tacoma Water addressing leaks in the system?

Yes, we are aggressively going after leaks in the system to prevent any needless water use. Our system leakage has been monitored for many years, and we have leakage well below industry standards.

What can people do if they suspect a leak?

If you suspect a leak, your water meter can help confirm your suspicion. Make sure all faucets and water-using appliances like dishwashers and sprinklers are turned off and do not use any water during the test.

Test For Leaks

- With the water turned off, watch your meter.
- If your water meter has a low-flow indicator (a small, triangular gauge or wheel), see if it moves. A flow indicator that moves when all water is turned off indicates a leak.
- Some leaks use water periodically, such as a toilet leak. In this case, write down the numbers on your water meter and do not use water for an hour.
- Check the meter after an hour and note any change in the numbers. If the numbers have changed, you probably have a leak.

[Get more leak information here.](#)

Who can customers call with their questions?

Customers can contact our Water Counter at (253) 502-8247 or conservation@cityoftacoma.org with questions regarding the drought and the stage 1 advisory.

My neighbor has a leak and they won't fix it. It's wasting water. What can I do?

We recommend that if you feel comfortable talking to your neighbor, you bring this to their attention. We are asking each customer to make good choices about their own water use. Where you see possible leaks or broken sprinklers that are wasting a lot of water, please contact us if you are not successful contacting your neighbor. We will try to follow up with that customer. We are not enforcing customer-side pipe leak repairs in the advisory stage, but we will be notifying customers when we suspect they have a leak on their property, especially if the leak is so large that it's causing damage in the street or in the right of way. We want to know of those circumstances immediately so that we can promptly investigate the situation.