



TUALATIN VALLEY
WATER DISTRICT

EMERGENCY PREPAREDNESS

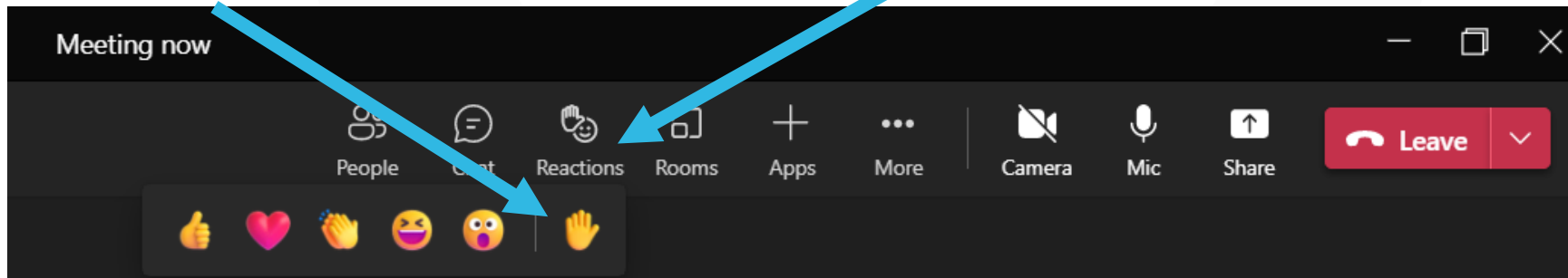


Talkin' Water

September 21, 2022

VIRTUAL EVENT GUIDELINES

- Sessions are recorded.
- Please make sure your microphone is muted.
- Raise your hand to ask questions by clicking on the Reactions button and then clicking on the hand.



- Once TVWD Staff call on you, unmute your microphone and ask your question. When finished, please mute your microphone again.
- TVWD operates in an inclusive and discrimination-free manner to serve all customers. Staff may exclude participants who disrupt events.

TODAY'S PRESENTERS



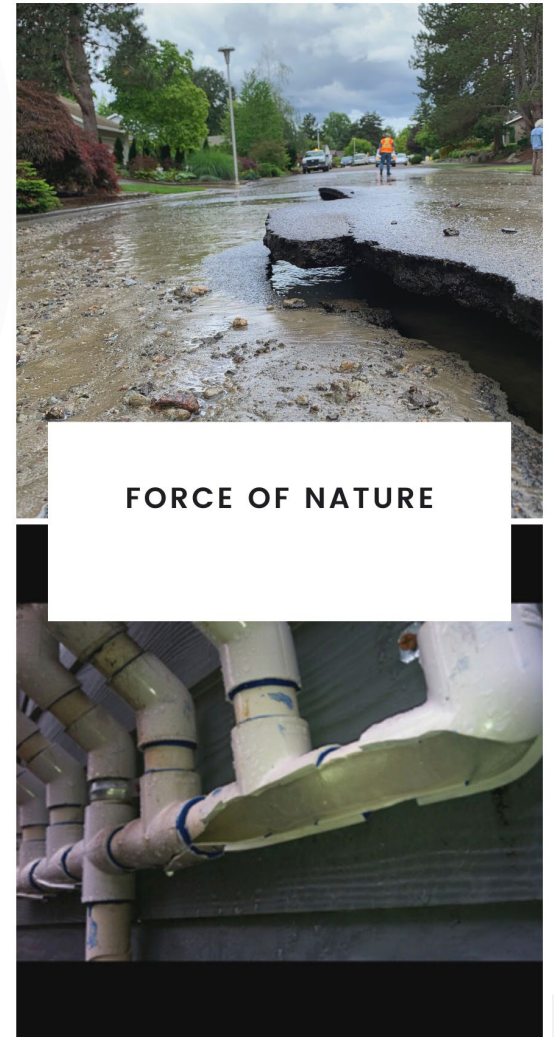
Dave Kraska, PE
Willamette Water Supply
Program Director



Kevin Sutherland
Emergency Program Coordinator

SERVICE INTERRUPTIONS

- Water main breaks
- Planned outages for maintenance, repair, or replacement
- Fire events
- Disasters – weather - wind, ice, drought, heat, extended power outage, contamination, earthquake



How we are preparing

- Mitigation
- Collaborations / Partnerships
- Planning
- Training / Exercises



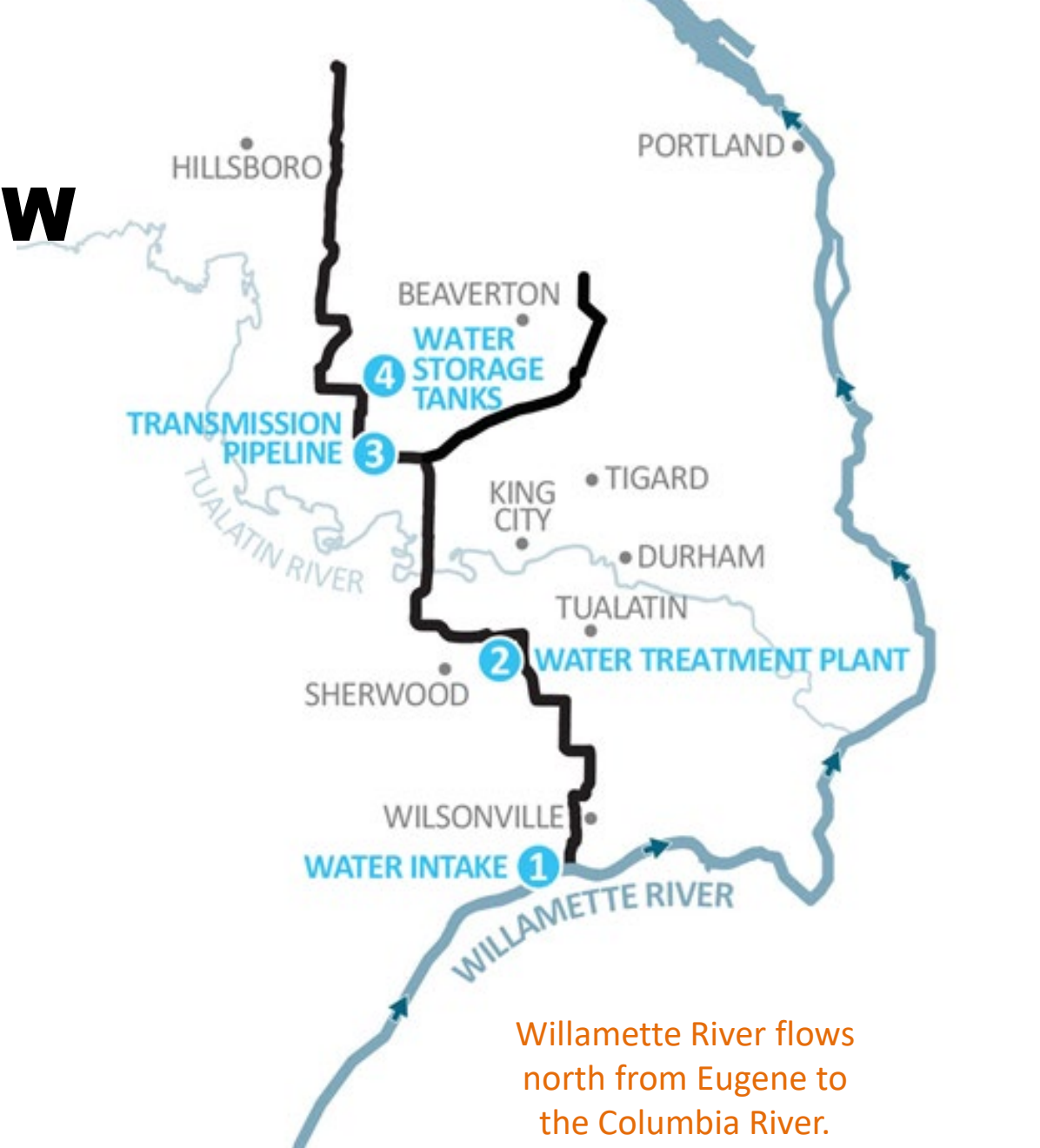
WILLAMETTE WATER SUPPLY PROGRAM MISSION

Provide a cost-effective, reliable, and resilient water supply system by July 2026, that benefits current and future generations of the communities we serve and supports a vibrant local economy.



WILLAMETTE WATER SUPPLY SYSTEM OVERVIEW

1. Willamette River intake, located in Wilsonville
2. New state-of-the-art water treatment plant
3. 30+ miles of large diameter transmission pipeline
4. Water storage



SEISMIC RESILIENCE IS INTEGRAL TO THE WILLAMETTE WATER SUPPLY SYSTEM DESIGN AND CONSTRUCTION

Examples:

- Raw Water Facilities Ground Improvements
- Structural Design Features
- Pipelines Design Features



GROUND IMPROVEMENTS AT THE RAW WATER FACILITIES



Jet Grouting

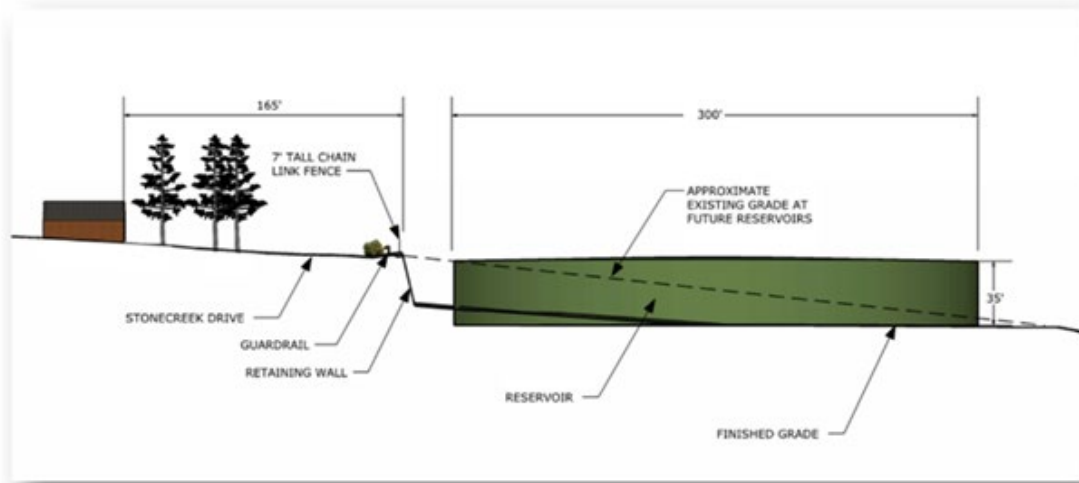


Deep Soil Mixing



Water storage tank will hold water to be delivered to homes and businesses by gravity and provide emergency storage

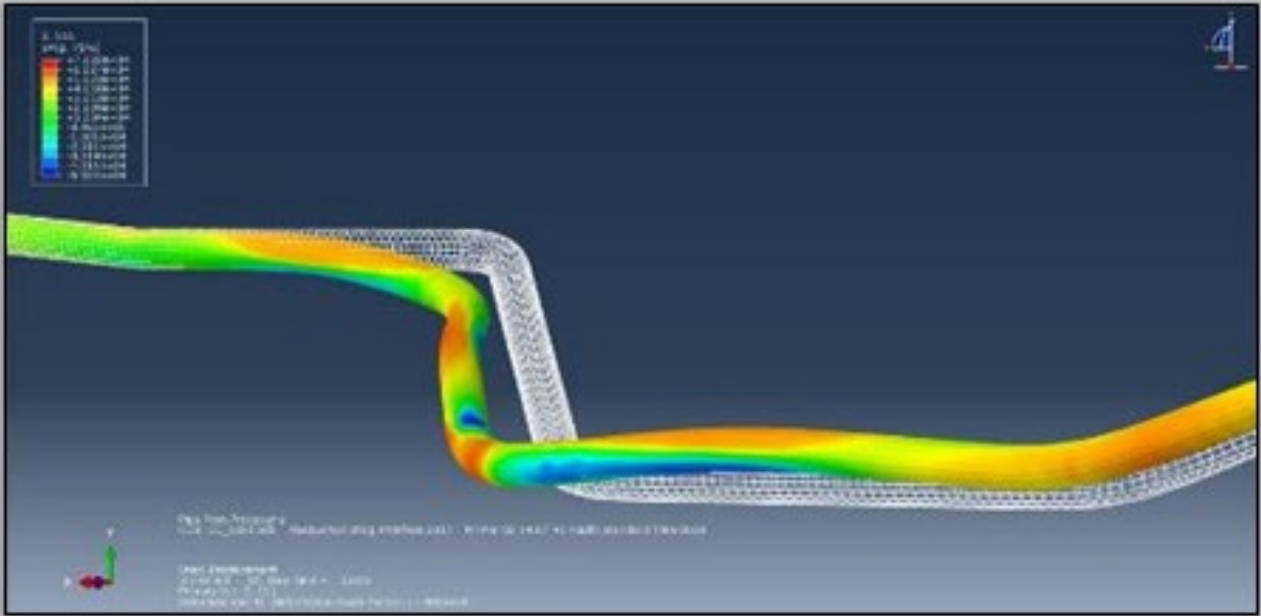
SEISMICALLY-RESILIENT RESERVOIR DESIGN



Seismic cables will tie the tank walls to the foundation to resist movement during earthquakes



WWSS PIPELINE DESIGN ACCOUNTS FOR LOCAL GEOLOGIC CONDITIONS



TVWD'S SYSTEM DESIGNED FOR RESILIENCE



- Regional interconnectivity
- Multi-process water treatment
- Backup systems
- Automated controls
- Multiple water sources
- Cooperative agreements to share resources in emergencies
- Emergency water distribution trailers
- Disaster drills, training and exercises
- Customer education and preparedness

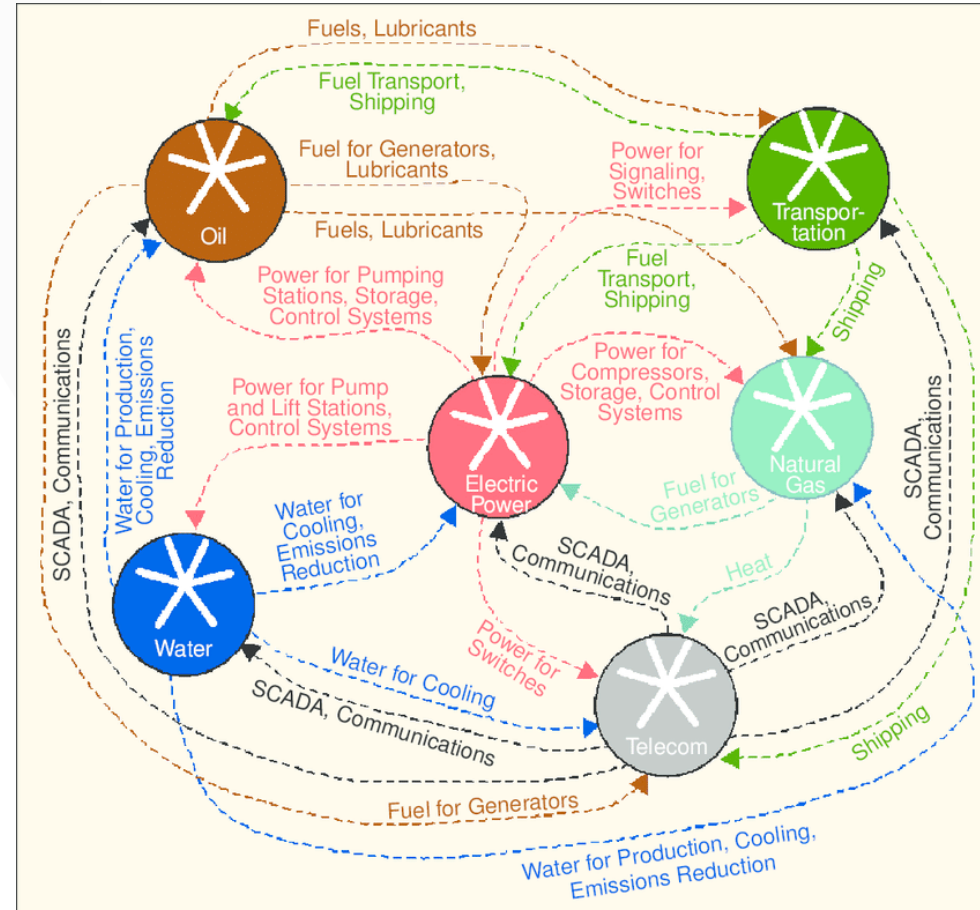




Local Natural Hazard Mitigation Plan

INFRASTRUCTURE INTERDEPENDENCIES

- Training
- Drills
- Exercises



How you can prepare

- 2 Weeks Ready
- Ready.gov
- American Red Cross



WHY SHOULD WE PREPARE?

Being prepared can:

- Reduce fear
- Alleviate anxiety
- Reduce loss that accompanies disasters
- Resiliency in the face of disaster
- Important work can continue to support response to the needs of the community
- Peace of mind





YOU ARE KEY TO DISASTER RESPONSE

- TVWD and services may be disrupted or unusable due to a main break, planned outage, or a disaster.
- During a disaster other utilities, government entities, and supply chains may not be able to provide water right away.
- It is important to keep an emergency supply of water. Water may not be available or accessible for an extended amount of time.
 - Assistance during an emergency or disaster may be delayed. The responders often are affected by the disaster themselves.
 - We may need to make sure firefighting, hospitals, and other emergency response have availability to water.

DO SOMETHING TODAY TO GET BETTER PREPARED

- Be Informed of what hazards can impact you
 - Sign up for local alerts
 - Download the FEMA app
- Have a plan
 - Know how you'll contact your loved ones and reconnect if separated
 - Consider everyone's needs and abilities (think: evacuation plan/route, shelter options, etc.)
- Make a kit and supplies ready
 - Consolidate important items you already have
- Get Involved in your community's preparedness



Ready  

SIGN UP

For local weather and emergency alerts.



Prepare for disasters to create a lasting legacy for you and your family.

VISIT [READY.GOV/PLAN](https://www.ready.gov/plan)

WHY IS WATER SO IMPORTANT?



* There are many circumstances where these numbers could be drastically shortened.

S.I.T. WITH WATER

Store

Have at least one gallon per day for each family member for two weeks stored within your home. One gallon is the minimum recommended for drinking, hygiene and cooking requirements. More for pets and special needs.

Isolate

Identify the location of your main shutoff valve. You may need to isolate your home from the public water system to conserve your safe drinking water within your pipes and water heater tank.

Treat

Depending upon the disaster at hand, water may still be available but not safe to drink. Contaminated or suspect water can be treated during an emergency to make it safe for consumption. We will discuss this later.

EXAMPLES OF HOME WATER STORAGE



55 Gallon Drum with pump, bung wrench, and water preserver.



Various sizes of commercially designed water containers. Distribute your supply in multiple areas of your residence if possible.



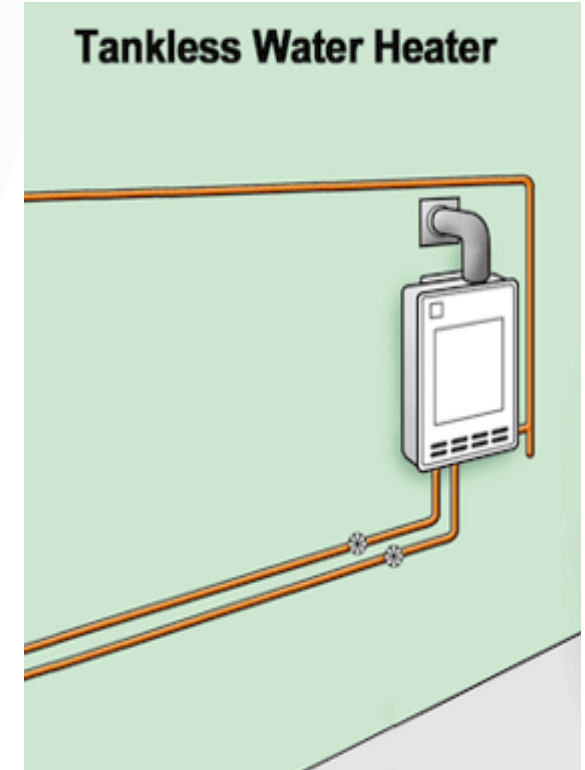
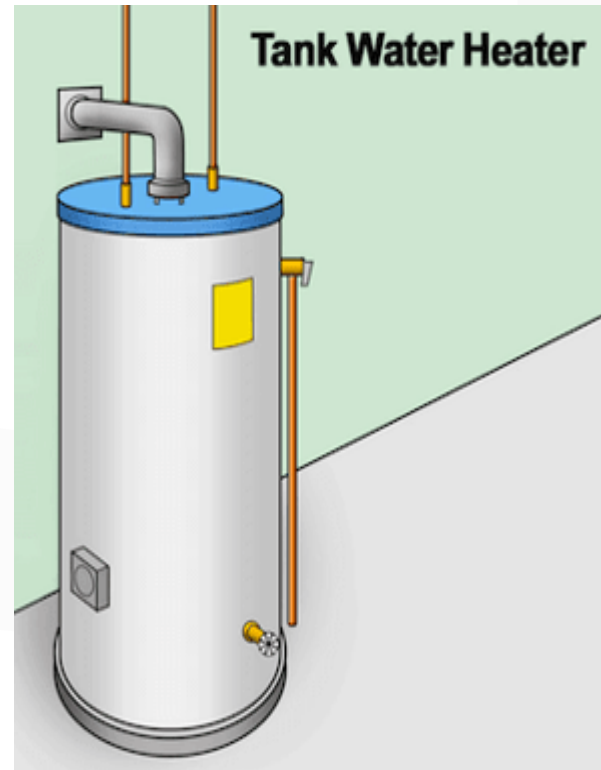
Water bricks stored in pantry.

WATER HEATERS AS EMERGENCY STORAGE

Water heaters may be found in a garage, basement, or even an attic. They can hold 20-80 gallons of water.

Identify the location of your hot water heater. Some homes do not have water heaters.

Tankless water heaters cannot be used for emergency storage.



OTHER SOURCES OF WATER WITHIN YOUR HOME

- Do not consume any beverages or canned food from containers that have been submerged in floodwaters.
- Avoid caffeinated and alcoholic drinks for water intake.



EMERGENCY OUTDOOR WATER SOURCES

- Collected rainwater
- Streams, rivers & other moving bodies of water
- Ponds and lakes
- Natural springs

Water from these sources should be treated.



TREATING EMERGENCY WATER

If you are uncertain about the purity of any water source during or after an emergency, you can make it safe by treating before drinking, food preparation, or hygiene use.



Follow instructions from your water provider to make sure your water is safe to drink after boiling.



Sodium hypochlorite (concentration 5.25% to 6%) should be the only active ingredient in the bleach. There should be no added soap or fragrance. Stored bleach loses potency over time.

TREATING EMERGENCY WATER



Follow instructions provided on or with the packaging. Purification tablets also have expiration dates and will need to be replaced periodically.

You should not consume iodinated water if you are pregnant or have thyroid disease



Water filters can vary in size, capability, and portability. Water filters can be purchased commercially, online or homemade.

Have varying sizes and keep them in different locations.

DO NOT DRINK

The following types of water are unsafe to drink, even if you treat or filter it. Starred (*) items could be used as sources for sanitation uses.

- Water from your toilet bowl or tank, radiators, or water beds*
- Water from your pool, hot tub, or other outdoor water source*
- Flood water
- Water that has floating materials in it or that has an unusual odor or color
- Water that you know, or suspect might be contaminated with fuel, heavy metals, or toxic chemicals

SHUT OFF WATER TO YOUR HOUSE

After an emergency like an earthquake, first ensure you and your loved ones are safe. If it is safe to stay in your home, consider shutting off your main water supply to your home. Look for your shut off valve before an emergency in the following places:

- In the crawl space or basement, where your water line enters the home.
- In the garage where your water line enters the wall or ceiling, possibly near a water heater or laundry hookup.
- Outside near the foundation, often protected by a concrete ring or clay pipe.



MAKE A PLAN AT HOME

- Create a meeting location outside of your home
 - Nearby Stop sign
 - Neighbors house
- Develop a communications plan
 - Include an out of state contact
 - Develop key words or phrases
- Develop a preparedness calendar
 - Purchasing preparedness items throughout the week/month/year
 - When to change out items that have been stored



MAKE A PLAN AT WORK

- Have an emergency contact on file both in and out of state
- Know where the safe meeting locations and how to access them
- Develop key words or phrases with supervisors and co-workers

BUILD A KIT: AT HOME

- Provision for at least two weeks
 - Food
 - Canned
 - Dehydrated
 - Water
 - Gallon of water per person per day
 - People, pets and special needs
 - Personal information
 - Deed to house
 - ID cards
 - Marriage/divorce/death certificates
 - Pictures
 - Bank information
 - Safety considerations



BUILD A KIT: CARS

Have a kit for work and personal vehicles. Include:

- Supplies for 24 hours
- Water, food
- Shovel, jumper cables, chains
- Emergency blanket
- Spare tire, jack, road flares
- Cash
- First Aid Kit, Medication
- Personal entertainment
- Spare work badge
- Reflective gear
- Emergency numbers
- Toiletries
- Kitty litter



OCTOBER 20 AT 10:20 AM IS SHAKEOUT!

Get October 20, 2022
Ready to
Shake
Out.

Shake OutTM

www.ShakeOut.org

If You Feel Shaking or Get an Alert

If Possible



Using Cane



Using Walker



Using Wheelchair





TUALATIN VALLEY
WATER DISTRICT

THANK YOU FOR JOINING US

[Tvwd.org/preparedness](https://tvwd.org/preparedness)
outreach@tvwd.org

YOUR TURN! ANY QUESTIONS?



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