

Emergency Preparedness

Presented by the Seattle Office of
Emergency Management



Important Links

www.Seattle.gov/emergency-management

OEM@Seattle.gov

Carl.Leon@Seattle.gov

www.SeattleEmergencyHubs.org

Unofficial:

[Youtube.com/@SeattlePrepares](https://www.youtube.com/@SeattlePrepares)

www.n7kuw.com/Handouts/

(hint: download handoutlist.pdf first)





Emergency Management

Alert Seattle

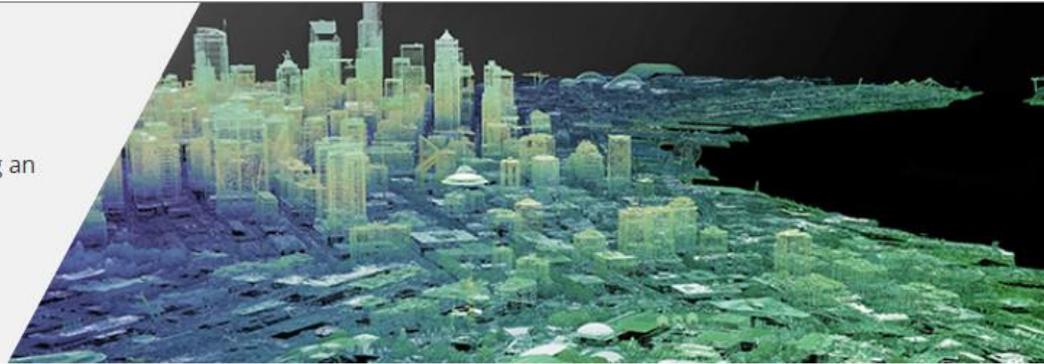
Sign Up for Newsletter

Prepare ▾ Disaster Impacts ▾ Education and Engagement ▾ City Emergency Readiness ▾

Get Emergency Updates

AlertSeattle is the best way to get critical public safety information during an emergency.

Sign up for Alerts



Learn About Emergencies



Hazards Explorer Map



Grants and Disaster Relief



Multi-Language Resources



Public Disaster Education



How-To Videos [↗](#)





Index of /Handouts

Name	Last modified	Size	Description
Parent Directory		-	
1. Checklist_USB.pdf	2022-07-06 12:31	74K	
2. Checklist_Basic.pdf	2022-07-06 12:31	79K	
3. Checklist_Car.pdf	2022-07-06 12:31	79K	
4. Checklist_Pet.pdf	2022-07-06 12:31	79K	
5. Checklist_Office.pdf	2022-07-06 12:31	80K	
6.5 x 20 English Inf.>	2023-09-08 13:54	3.5M	
6. Emergency_Contact.>	2022-07-06 12:31	30K	
Accessing and Purify.>	2022-07-06 12:31	852K	
Alaska 7.0 earthquak.>	2022-07-06 12:31	35K	
Alaska 7.0 earthquak.>	2022-07-06 12:31	117K	
Alert Seattle.pdf	2022-07-06 12:31	1.2M	
Ann's links.docx	2022-07-06 12:31	16K	
Ann's links.pdf	2022-07-06 12:31	305K	
Be Prepared.pdf	2022-07-06 12:31	2.7M	
Be Prepared Gather I.>	2022-07-06 12:31	1.9M	
Child Care Disaster.>	2022-07-06 12:31	11M	
Contact Card.pdf	2022-07-06 12:31	503K	
Disaster Kit.pdf	2022-07-06 12:31	2.3M	
Disaster Plan.pdf	2022-07-06 12:31	2.6M	
Drinking From Water.>	2022-07-06 12:31	578K	
Drop Cover Hold.pdf	2022-07-06 12:31	1.2M	
Emergency Water.pdf	2022-07-06 12:31	1.1M	
Emergency disinfecti.>	2022-07-06 12:31	737K	
General Preparedness.>	2025-10-07 14:46	3.2M	
General Preparedness.>	2025-10-07 14:46	14M	
Handout List.pdf	2025-10-07 14:46	127K	
Handout List.xlsx	2025-10-07 14:46	13K	
Helen's Websites and.>	2022-07-06 12:31	17K	
Helen's Websites and.>	2022-07-06 12:31	110K	
Help Okay 1.pdf	2022-07-06 12:31	1.5M	
Help Okay 2.pdf	2022-07-06 12:31	495K	
How To Be Safe.pdf	2022-07-06 12:31	1.0M	
HubMap2021Update_Fin.>	2022-07-06 12:36	1.4M	
Major Utility Lines.pdf	2022-07-06 12:31	1.9M	



Files available at www.n7kuw.com/Handouts/	
Full name of file	Displayed name on website
1. Checklist_USB.pdf	1. Checklist_USB.pdf
2. Checklist_Basic.pdf	2. Checklist_Basic.pdf
3. Checklist_Car.pdf	3. Checklist_Car.pdf
4. Checklist_Pet.pdf	4. Checklist_Pet.pdf
5. Checklist_Office.pdf	5. Checklist_Office.pdf
6. Emergency_Contact_Card.pdf	6. Emergency_Contact..
6.5 x 20 English Infographic.pdf	6.5 x 20 English Inf..
Accessing and Purifying Water.pdf	Accessing and Purify..
Alaska 7.0 earthquake articles-videos for outreach.doc	Alaska 7.0 earthquak..
Alaska 7.0 earthquake articles-videos for outreach.pdf	Alaska 7.0 earthquak..
Alert Seattle.pdf	Alert Seattle.pdf
Ann's links.docx	Ann's links.docx
Ann's links.pdf	Ann's links.pdf
Be Prepared Gather Information.pdf	Be Prepared Gather I..
Be Prepared.pdf	Be Prepared.pdf
Child Care Disaster Plan.pdf	Chilc Care Disaster..
Contact Card.pdf	Contact Card.pdf
Disaster Kit.pdf	Disaster Kit.pdf
Disaster Plan.pdf	Disaster Plan.pdf
Drinking From Water Heater.pdf	Drinking From Water..
Drop Cover Hold.pdf	Drop Cover Hold.pdf
Emergency Water.pdf	Emergency Water.pdf
emergency_disinfection_of_drinking_water_sept2017.pdf	emergency_disinfecti..
General Preparedness UW Spinal Oct 2025.pdf	General Preparedness..
General Preparedness US Spinal Oct 2025.pptx	General Preparedness..
Handout List.xlsx	Handout List.docx
Handout List.pdf	Handout List.pdf
Helen's Websites and Links Handout.docx	Helen's Websites and..
Helen's Websites and Links Handout.pdf	Helen's Websites and..
Help Okay 1.pdf	Help Okay 1.pdf
Help Okay 2.pdf	Help Okay 2.pdf
How To Be Safe.pdf	How To Be Safe.pdf
HubMap2021Update_Final.pdf	HubMap2021Update_Fin..
Major Utility Lines small.pdf	Major Utility Lines.pdf
Major Utility Lines.pdf	Major Utility Liines..

Seattle is vulnerable to many disasters...



Seattle's top hazards...

1. Earthquakes
2. Snow and Ice
3. Windstorms
4. Power Outages
5. Cyber Attacks
6. Landslides
7. Disease Outbreaks
8. Flooding
9. Excessive Heat
10. Tsunamis/Seiches
11. Infrastructure and Structural Failures
12. Fires
13. Transportation Incidents
14. Water Shortages
15. Social Unrest
16. Attacks
17. Hazmat Incidents
18. Volcanic Hazards



SHIVA - Seattle Hazard Index and Vulnerability Analysis

	Most Likely Scenario														Maximum Credible Scenario														Future Emphasis	Combined Ranking				
	Geographic Scope	Duration	Health Effects	Displacement	Economy	Environment	Structures	Transportation	Critical Services	Confidence in Govt	Base Score	Frequency (F)	Cascading Effects (CE)	Multiplier (F + CE)	Subtotal	Geographic Scope	Duration	Health Effects	Displacement	Economy	Environment	Structures	Transportation	Critical Services	Confidence in Govt	Base Score	Frequency (F)	Cascading Effects (CE)			Multiplier (F + CE)	Subtotal		
Earthquakes	5	2	2	2	2	2	3	2	2	1	2.3	4	4	8	18.4	5	5	5	5	5	5	5	5	5	5	5	5	5.0	2	5	7	35	3	56.4
Snow & Ice Storm	5	3	2	2	2	1	2	2	2	1	2.2	5	2	7	15.4	5	4	2	3	3	2	2	4	3	3	3.1	3	3	6	18.6	5	39.0		
Windstorms	5	1	2	2	2	2	2	2	2	1	2.1	5	2	7	14.7	5	2	2	3	3	2	3	4	4	3	3.1	3	3	6	18.6	3	36.3		
Power Outages	3	2	2	2	2	1	1	2	2	1	1.8	5	2	7	12.6	5	4	2	4	3	1	2	3	3	5	3.2	3	3	6	19.2	3	34.8		
Cyber-attack/Disruption	5	4	1	1	2	1	1	2	1	3	2.1	3	1	4	8.4	5	4	2	5	4	3	1	4	4	3	3.5	2	4	6	21	5	34.4		
Landslides	4	3	2	2	1	2	2	3	1	1	2.1	5	1	6	12.6	3	3	3	3	3	3	3	4	2	3	3.0	2	4	6	18	3	33.6		
Disease Outbreaks	5	5	4	1	2	1	1	1	1	1	2.2	4	1	5	11.0	5	5	5	5	4	1	1	3	3	3	3.5	3	2	5	17.5	5	33.5		
Flooding	5	2	1	2	2	2	2	2	1	1	2.0	5	1	6	12.0	5	4	2	4	3	2	3	4	3	3	3.3	2	3	5	16.5	5	33.5		
Excessive Heat Events	5	3	2	2	2	1	1	2	1	1	2.0	5	1	6	12.0	5	4	4	4	3	2	1	3	3	3	3.2	3	2	5	16	5	33.0		
Tsunamis and Seiches	3	2	2	3	3	2	3	2	1	1	2.2	2	2	4	8.8	4	2	4	5	4	3	3	4	3	3	3.5	2	4	6	21	3	32.8		
Infrastructure & Structural Failure	1	2	1	2	2	2	2	2	2	3	1.9	5	2	7	13.3	4	5	3	4	3	3	2	4	3	5	3.6	1	3	4	14.4	5	32.7		
Fires	2	2	2	4	1	1	2	2	2	1	1.9	4	2	6	11.4	2	4	4	3	3	2	2	4	2	3	2.9	2	4	6	17.4	3	31.8		
Transport Incidents	1	1	3	2	1	1	2	2	1	1	1.5	5	2	7	10.5	3	2	4	3	2	2	2	3	2	3	2.6	2	5	7	18.2	3	31.7		
Water Shortages	5	5	1	2	2	2	2	1	3	1	2.4	5	2	7	16.8	5	5	1	3	3	3	2	1	3	3	2.9	2	2	4	11.6	3	31.4		
Social Unrest	3	1	2	3	3	1	2	2	2	3	2.2	5	2	7	15.4	5	3	3	5	3	1	3	2	2	5	3.2	2	2	4	12.8	3	31.2		
Attacks	1	1	2	2	2	2	2	2	1	3	1.8	5	2	7	12.6	4	2	3	3	2	1	2	4	4	3	2.8	2	1	3	8.4	5	26.0		
HazMat Incidents	3	1	3	4	2	2	2	2	2	1	2.2	3	2	5	11.0	3	3	2	2	3	4	2	3	2	5	2.9	1	3	4	11.6	3	25.6		
Volcano Hazards	2	5	1	4	3	2	3	2	3	1	2.6	2	1	3	7.8	5	5	2	2	3	2	4	5	2	1	3.1	1	3	4	12.4	3	23.2		

Table 2-1. Hazard Ranking



CITY OF SEATTLE CEMP - SHIVA
HAZARD RANKING AND METHODOLOGY



Earthquakes in Seattle

The Seattle area experiences three earthquake types with three very different consequences.

1. Crustal or Shallow Quakes

Seattle Fault, ~1100 years ago (~7), N. Bend April 1945 (5.7)

2. Intraplate or Deep Quakes

Nisqually 2001 (6.8), April 1965 (6.5), April 1949 (7.1), February 1946 (5.8)

Average ~ 20 years, minimum 3 years, maximum 56 years

3. Subduction Zone or Megathrust Quakes

Cascadia, January 1700 (~9) (average every 500 years)

Earthquakes in Seattle



1949 Seattle Fault Quake & 2001 Nisqually Quake

Seattle Hazard Explorer & King County Ready Tool

[Seattle.gov/emergency-management](https://seattle.gov/emergency-management)

Scroll down to Seattle Hazard Explorer

www.hazardready.org/seattle

- Lets you explore specifics of each type of hazard, and shows where the vulnerable areas are within the City.
- What are your risks
 - What to expect
 - How to prepare
 - In Recent History



Seattle Hazard Explorer

[Explore](#)[Guide](#)[Resources](#)

Use this site to learn about hazards that cause disasters in Seattle. It combines hazard data with demographics and critical facilities. Look for places that have high populations, large inequities, and hazard exposure. These are the most vulnerable parts of Seattle. If you need a detailed How To, the Guide offers detailed instructions and information about the data. Visit the Resources page to learn how to get prepared.

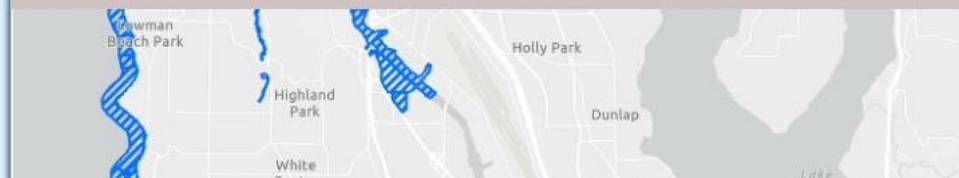
Earthquakes



Earthquake Scenarios



Floods



Wildfires and Air Quality



Overview and Model Limitations

Each model estimates potential structural damage to buildings. The colors show the ratio of heavily damaged buildings to undamaged buildings in each Seattle census block. Red blocks have a high percentage of heavily damaged buildings while blue have none or very few.

The models show overall patterns and are not intended to predict damage to individual buildings. Each earthquake scenario map depicts a model of a potential earthquake from a particular source. **Use it only to gain a sense of overall damage patterns.** Model results will differ from actual events due to model limitations and differences between the modeled scenario and any actual event. Examples of limitations include incomplete data on building stock and simplifications of building performance. These limitations are especially pronounced the further in you zoom. **The results at the block level should not be considered definitive and should not be used for decision making about individual structures!** If you want to understand a building's seismic risk, hire a qualified engineer to evaluate the building.

Individual scenarios

1. Cascadia Subduction Zone M 9
2. [Seattle Fault M 7.2](#)
3. Nisqually M 6.8
4. Devil's Mountain Fault M 7.5
5. South Whidbey Island Fault M 7.5
6. Tacoma Fault M 6.9

One Concern Highlights Inequitable Earthquake Impacts

One Concern combines building damage estimates with demographics. Doing so allows us to understand whether some groups are impacted more or less than the general population. The table below shows how exposed a demographic compared to the general population. If a group is under exposed, the percentage is negative. If over exposed, the percentage is positive. For example, low-income people are 81% more represented in high damage blocks in the Cascadia scenario.

Summary of Earthquake Impacts Across Demographic Groups by Scenario

Group	Nisqually	Cascadia	Seattle Fault
Black	-21%	27%	53%
Asian	-34%	39%	36%
White	13%	-14%	-17%
Hispanic	-31%	15%	25%
Low income	-29%	81%	7%
Children	18%	-56%	5%
Seniors	-6%	-4%	5%

About the Building Damage Index

The models used here look at the ratios of different types of damage called Damage Indexes. The pictures below show what is meant by each damage index.

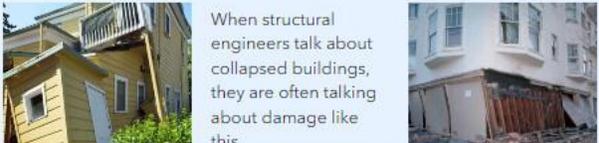
Damage Index 1



Damage Index 2 and Damage Index 2.5



Damage Index 3 and Damage Index 3.5

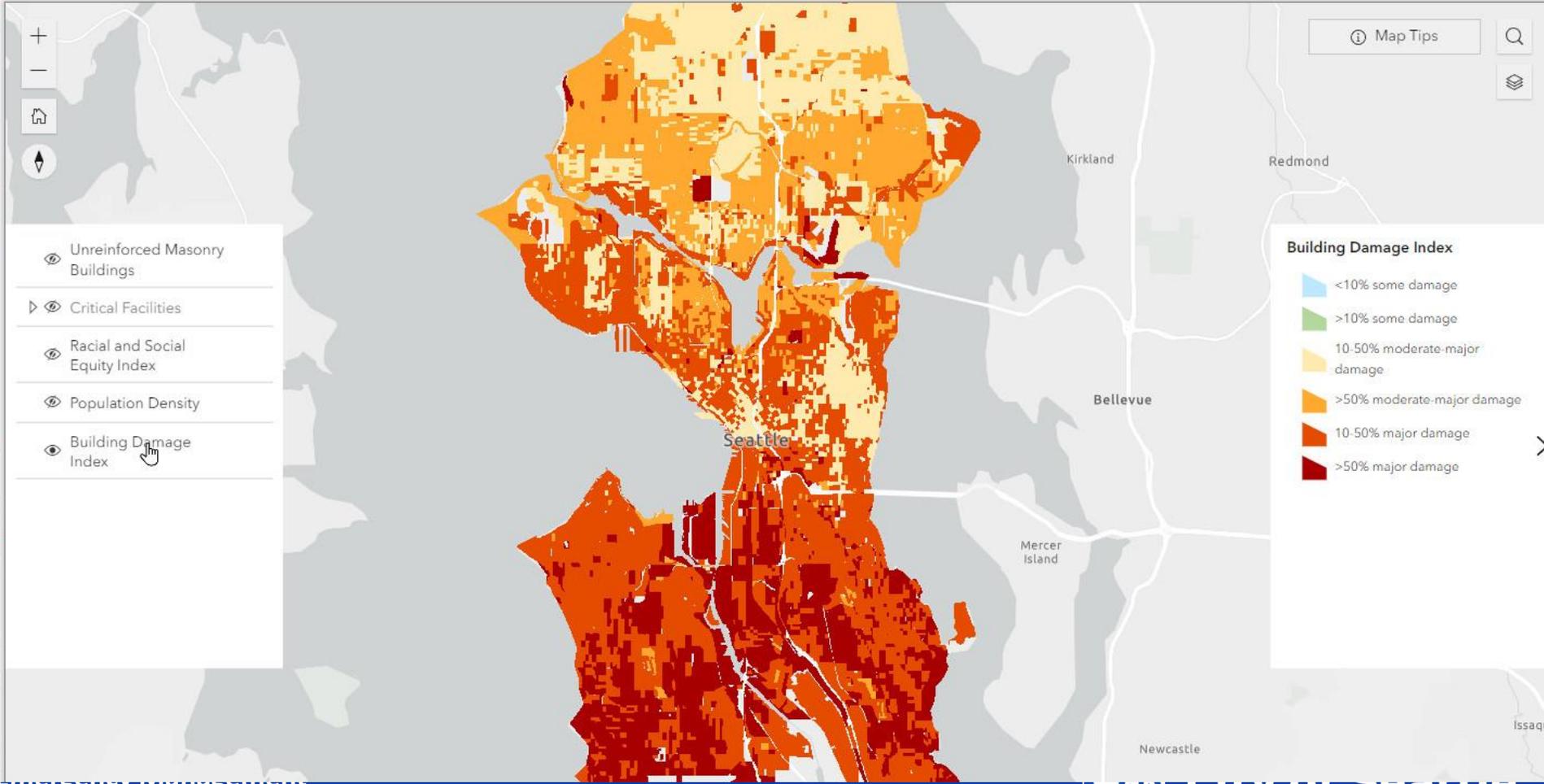
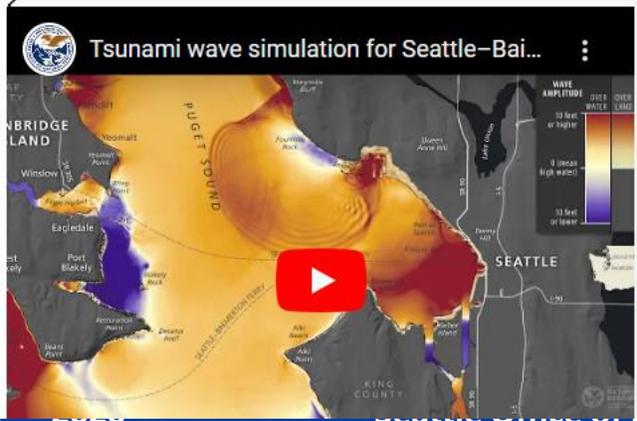


When structural engineers talk about collapsed buildings, they are often talking about damage like this.

Seattle Fault Scenario Magnitude 7.2

The Seattle Fault can generate earthquakes up to magnitude 7.2. Such an earthquake is Seattle's worst case natural hazard. Because the Seattle Fault runs through the middle of the city, the shaking here would be more intense than in a Cascadia event even though the magnitude is smaller. Virtually all the city would suffer damage, but the south part of Seattle would be especially hard hit. It has a 5-7% of generating a magnitude 6.5 or greater earthquake in the next 50 years.

An earthquake of this magnitude would also generate a local tsunami that would strike the shore within a matter of minutes. A model of a Seattle Fault tsunami was produced in 2022, but the scenario differs from the one used here. A video is linked below and is covered in the [Earthquakes Section](#).



- Unreinforced Masonry Buildings
- Critical Facilities
- Racial and Social Equity Index
- Population Density
- Building Damage Index

Know the reality

Events happen all the time; most do not impact the majority of people, cause significant damage, or have huge economic impact. But they CAN disrupt YOUR life, YOUR daily activity.

Medium events happen regularly, but mostly only still impact a minority of people, not everyone (think a major traffic incident that closes a freeway or bridge for an extended period).

Major events happen infrequently, can impact a much larger percentage of people, but are still managed at the local or regional level (think the recent “Bomb Cyclone” or some winter storms)

Know the reality

Catastrophic Disasters such as major Earthquakes happen very infrequently, but impact a large majority or all of the population and require national or international response for recovery.



In a catastrophic disaster, the services you rely on will be significantly disrupted. In lesser magnitude of disaster, the impacts will be less, perhaps not at all.

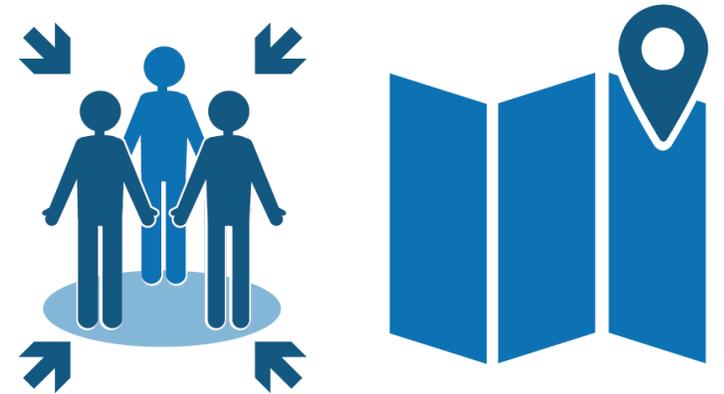
- People may not be able to get places easily (roads, bridges damaged, transit will stop)
- Stores may quickly run out of supplies
- Utilities may be damaged (electricity, water, sewer)
- Gas stations and ATM machines may not work – cash only society
- Hospitals may be overwhelmed
- Phones, cable TV, and internet may not work
- First responders may not be able to help you for some time



Develop a plan

Consider the following:

- How will you reunite with family?
- Know alternate routes home and to work
- Know plans for work and children's schools or day care
- What if you have no electricity?
- What if you have no water service?
- What if you can't occupy your home?
- What about your pets?



Questions I was asked to address with regard to disability related concerns:

People with spinal cord injuries or similar disabilities

Include the disabilities in whatever individual/specific plans you make

Mobility issues, wheelchairs (power or regular)

As above. If power take charging into consideration

Medications

Stock up – 2 weeks to 90 days on hand, carry a week with me

Ventilators/need for generator, etc.

Generator, spare batteries, solar – all have to be planned in advance

Communications with emergency personnel ahead of time

Plan ahead, communicate ahead, reach out to whomever in advance

How to get people off Mercer Island if bridges are not available

Seattle would not be responding agency/entity. I'm not aware of any specific plans for any island community. There may well be plans, but you need to reach out to your local emergency management/fire/police.



Communications Plan

Include the following in your communications plan:

- Texting is your best option
- Establish text message groups
- Social media
- Don't make calls unless absolutely necessary
- Preserve phone battery



Insurance and Government Assistance

- Do not rely on FEMA or other government assistance as your insurance plan
 - Usually no more than \$35,000 for a total loss
 - Small Business Administration (SBA) Loans vs. Individual Assistance Program (IAP)
- Homeowner's Insurance vs. Renter's Insurance
- Know what your insurance covers and what it does not
 - Earthquake – must be purchased separately
 - Flood – must be purchased separately through the NFIP
 - Rising water vs. Falling water

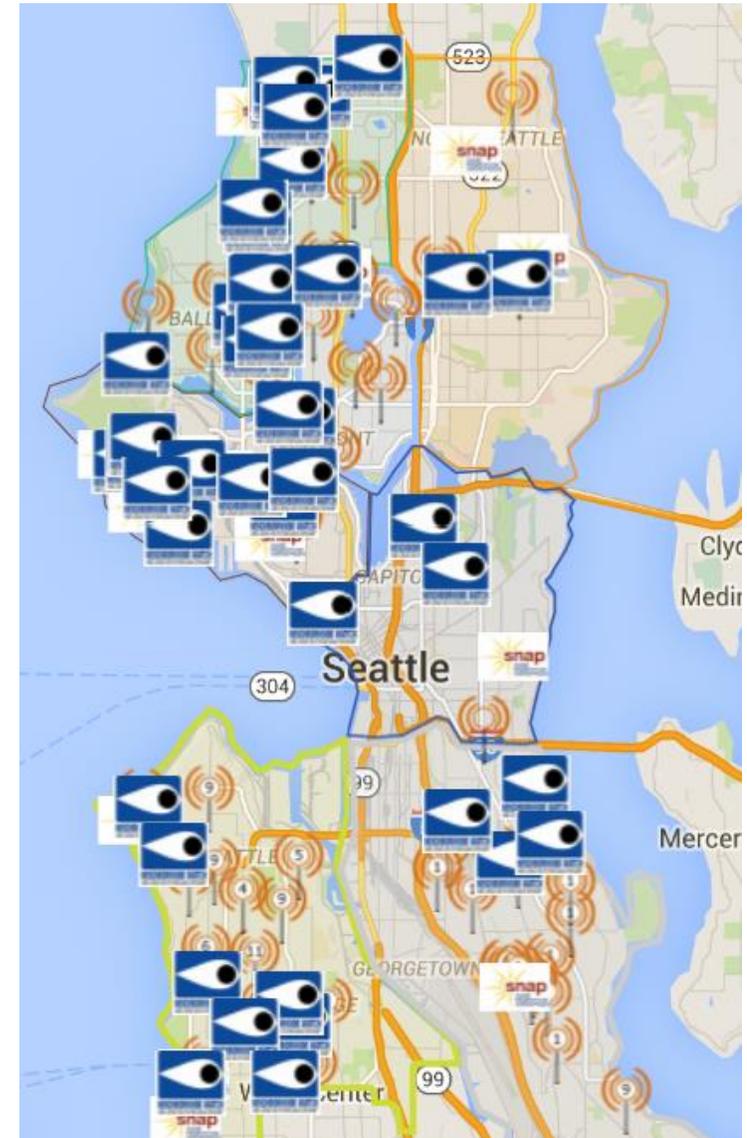


Know your neighborhood's plan

Help each other

Community Emergency Hubs
seattleemergencyhubs.org

SNAP Groups
Seattle.gov/emergency/snap





Seattle Neighborhoods Actively Prepare

Top 3 Neighborhood Response Priorities

1. Control utilities and prevent fire
2. Check on people (Search and Rescue)
3. Take care of injuries (First Aid)

After that:

- Shelter and care (take care of each other)
- Damage assessment (homes, streets, utilities)
- Communications (listen to radio for current information; share with family and neighbors)
- Connect with other neighborhoods and/or Community Emergency Hubs



Organizing for success in advance

Identify a SNAP Coordinator(s) and SNAP Contact(s)

Determine roles and responsibilities

- Utility control team
- Search and rescue team
- First aid team

Determine a meeting place



Head Start

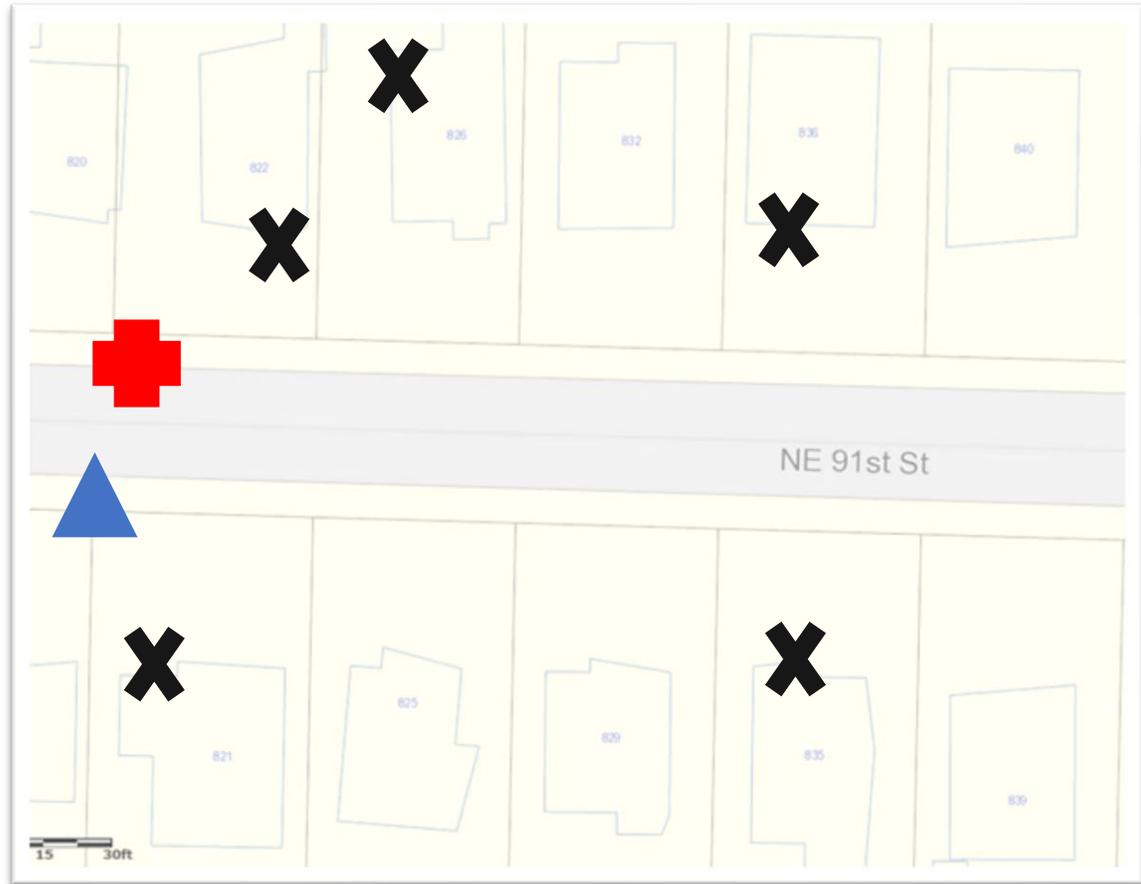
Customize to your strengths and needs:

- Who has children, pets, or lives alone?
- Who has special needs?
- Who has special skills?
- Who works from home?



Make a Map

Idea: Create a map of your neighborhood - Mark your meeting place, who lives where, homes with natural gas and the meter locations.



Meeting Place



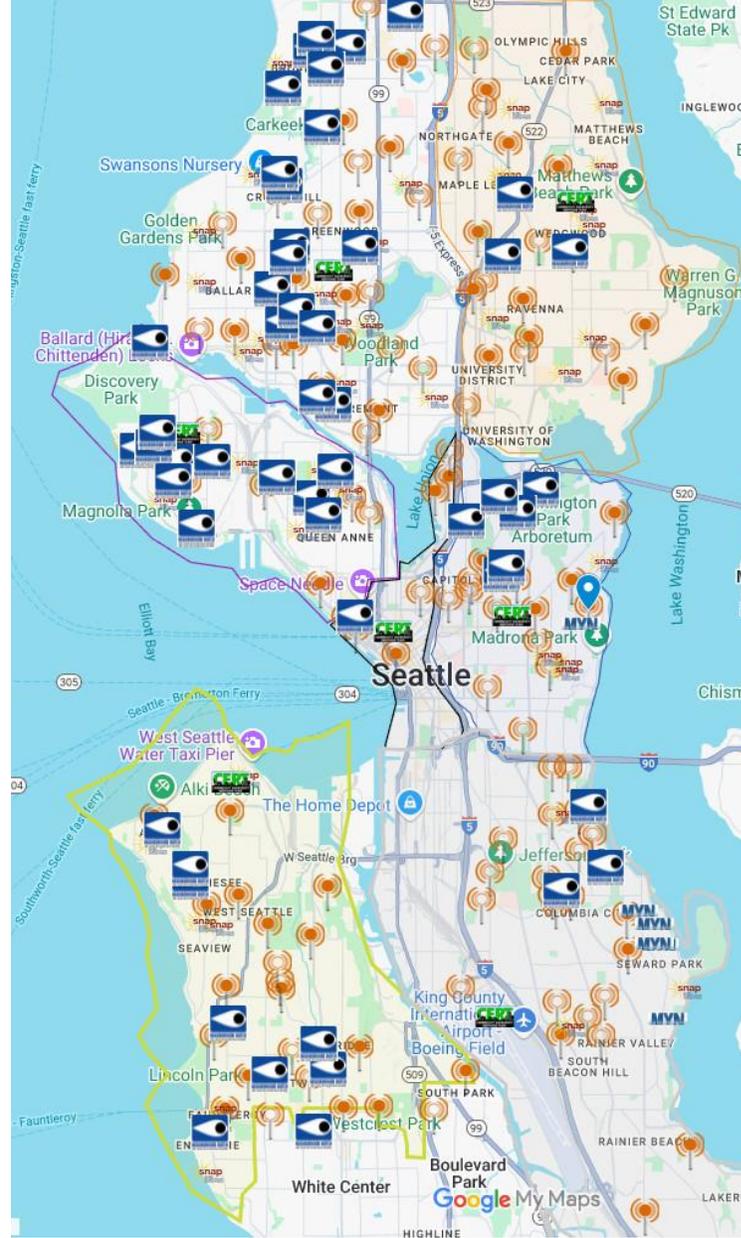
Gas Meters



First Aid Station

HUBS

SeattleEmergencyHubs.org





← Ravenna Park Hub



name
Ravenna Park Hub

description
5520 Ravenna Ave NE

Hub Location
By the tennis courts

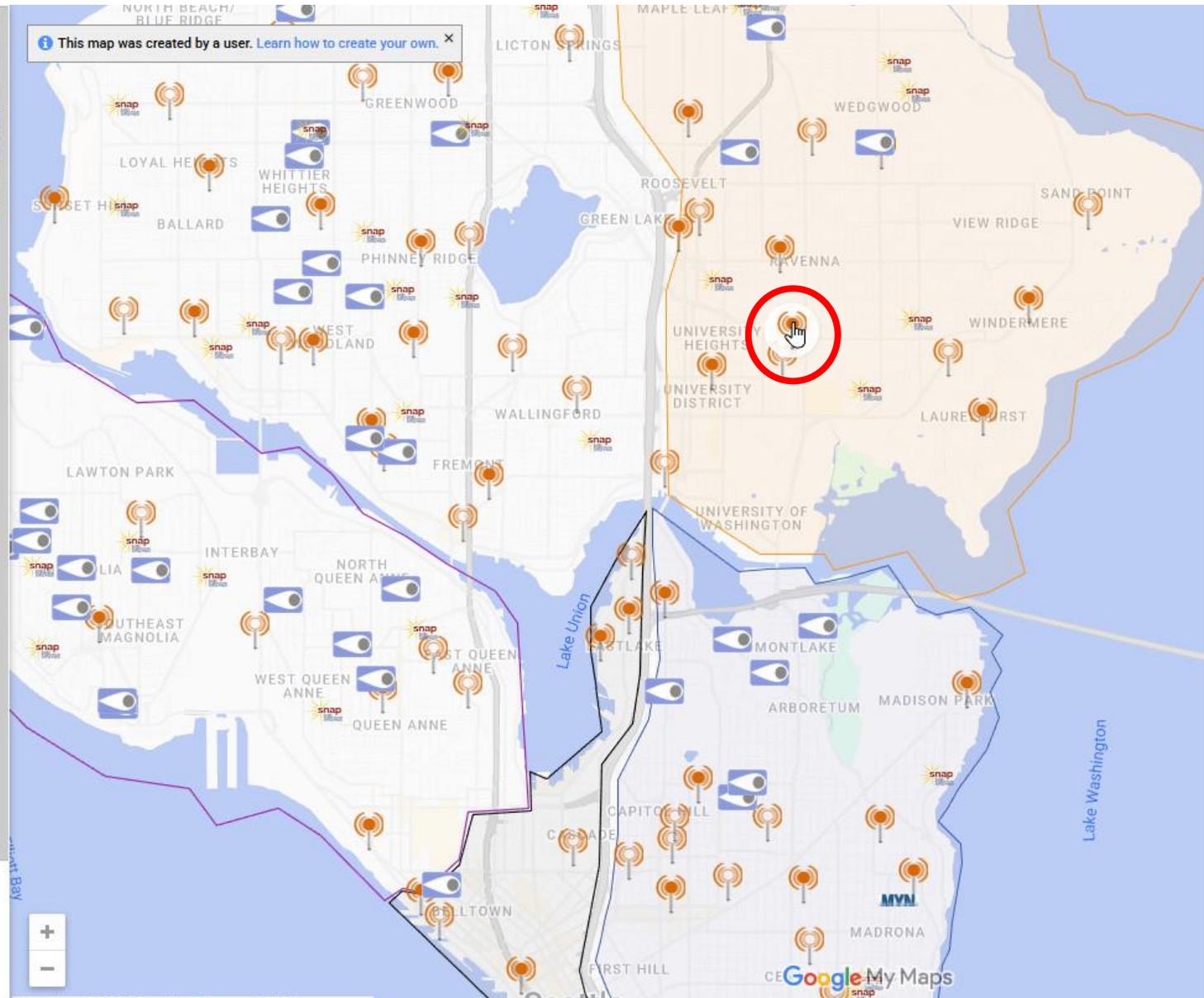
Hub Captain
Pam Okano

Email
RavennaParkHub@gmail.com

Website
<https://seattleemergencyhubs.org/ravennapark/>

Details from Google Maps
5520 Ravenna Ave NE, Seattle, WA 98105

4.8 ★★★★★ ⓘ



Home Hazard Mitigation and Retrofitting

Secure the following:

1. Large furniture
2. Wall hangings
3. Kitchen cabinets & contents
4. Water heater
5. Washer/Dryer
6. Stoves
7. Hazardous Materials

Go on a 30 minute home hazard hunt.

Attend a free home retrofit class.

Visit seattle.gov/emergency to register on our events calendar.

Retrofit your home

See a list of contractors on OEM's website.





Build a Kit

- Be prepared to be on your own for 14 days.
- Think about what you use on a daily basis, and include those items in your kit: **Food, water, stay warm & dry, safe light source, medication/health**
- Have a kit in your car and at work (get home bag)



"Get Home Bag"

- Water & Food
- Sturdy shoes
- Rain poncho
- **Paper Map!**
- Whistle
- Mask
- Flashlight / Headlamp
- Extra batteries
- Cash
- Picture of family / pets
- **Emergency phone numbers**
 - Loved ones
 - Out-of-town contact



What to do during an earthquake



- Don't run during the shaking
- Drop, Cover, and Hold under a desk or table
- If there's no table, find the nearest safe place beside an inside wall.
- If outside in an open area, sit down and cover your head with your arms
- If in the 'danger zone' next to a building, try to get back into the building and find shelter.

What to do after an earthquake

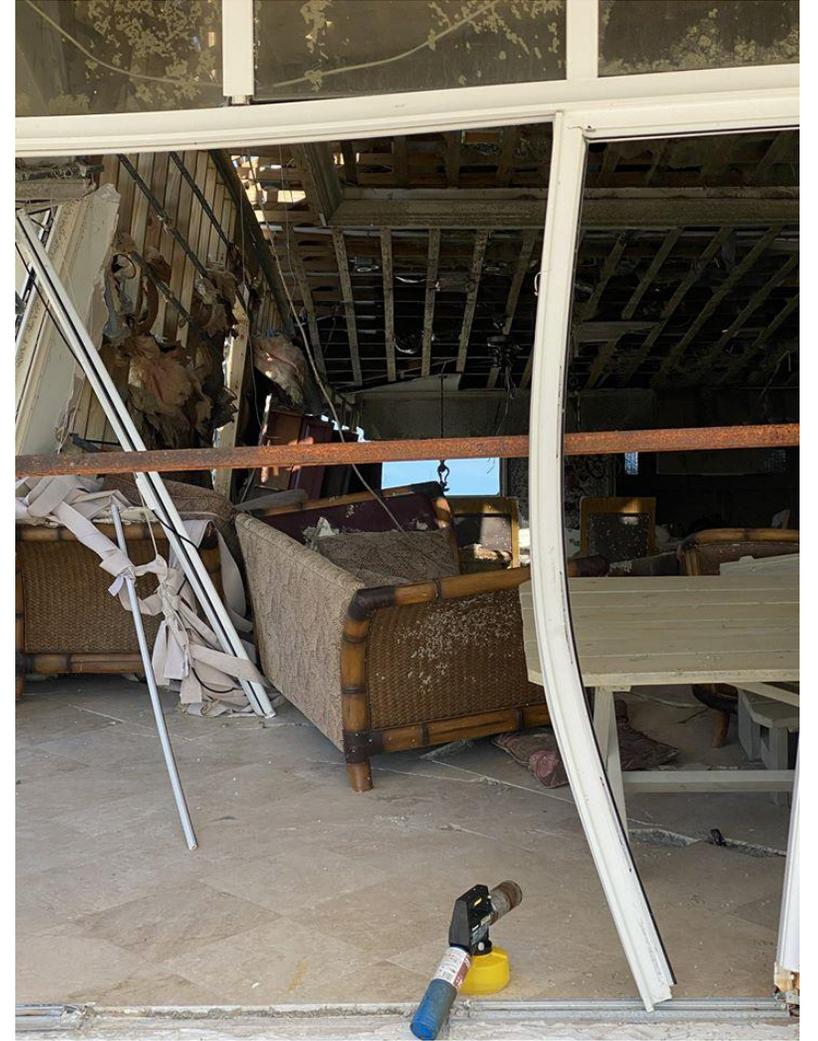
1. Check on yourself and your family for injuries
2. Check on your home
3. Check on others
4. Find out more information



Why you Drop, Cover, and Hold!



Safe to Re-enter?



Emergency Sanitation

- Following a major disaster, water and sewer lines may be disrupted. Do you know how to improvise an emergency toilet?

Supplies:

- 2 Plastic buckets with lids
- Heavy duty garbage bags and ties
- Absorbent material like cat litter or shredded newspaper
- Household bleach
- Soap
- Rubber gloves
- Toilet paper
- Antiseptic towelettes
- Hand sanitizer



Sanitation

City Guidance:

Bag it up and store waste safely until it can be picked up.

Options:

1. Line your own toilet with garbage bags (13 gallon)



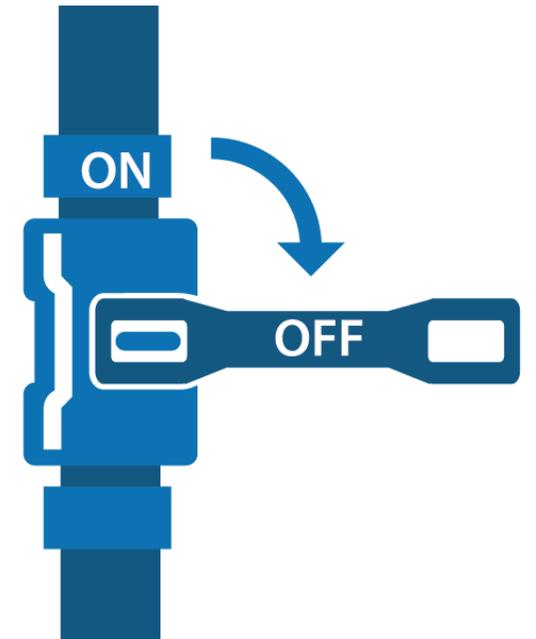
2. Emergency/camping toilet (5 gallon bucket w/lid and seat)
3. Have two, one for liquid waste, one for solid waste.



Know how and when to control utilities

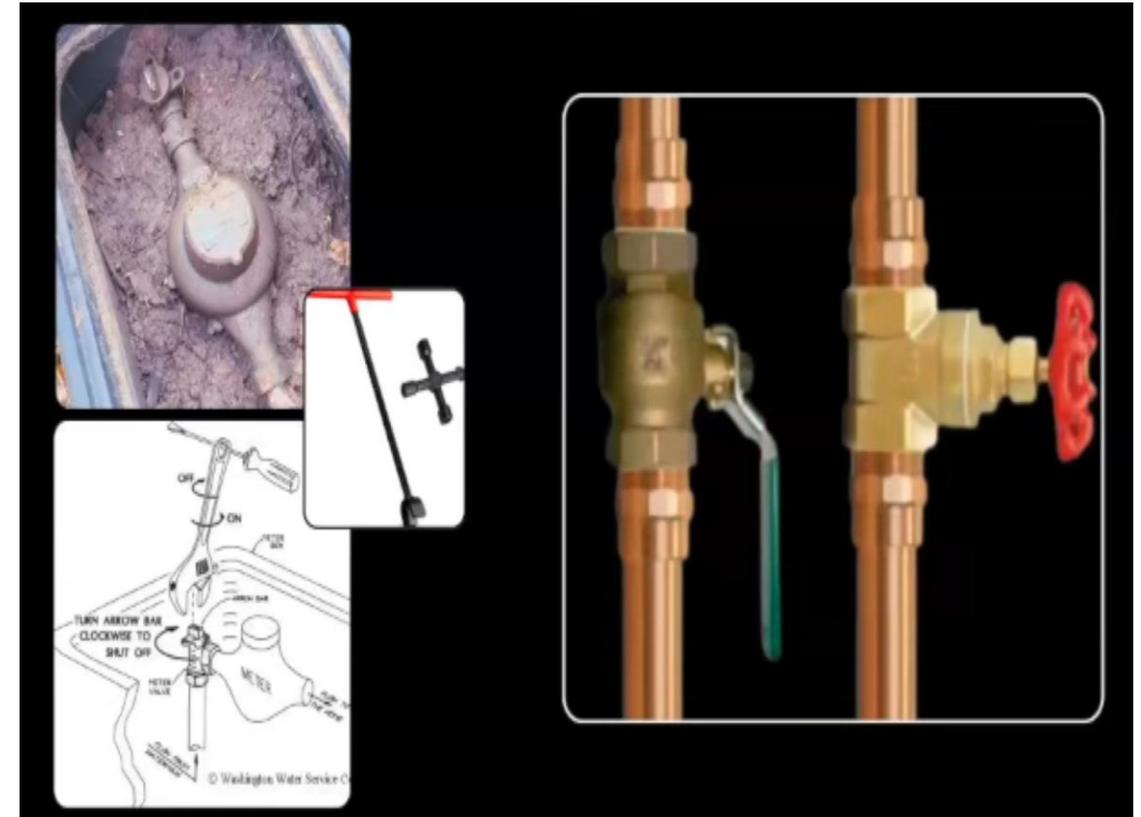
Shut off natural gas **ONLY** if necessary

- Only shut it off if you smell natural gas, hear a hissing sound, or the dial is spinning rapidly



Shut off water at the main house valve

- Typically located right outside your house or inside
- This saves the water in your hot water heater and toilet from possible contamination
- Turn off power to the water heater- attach a hose



Find out more information

- **Get AlertSeattle messages**

Sign up online at alert.seattle.gov

- **Tune into local emergency radio stations**

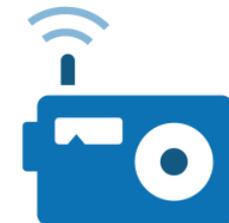
AM 710, AM 1000, FM 97.3, FM 97.7, and FM 94.4

- **Tune into local television**

- **Follow city departments on social media**

@CityofSeattle, @oemseattle, @SeattlePD,
@SeattleFire, @AlertSeattle, @SeattleDOT,
@SeattleSPU, @SEAcitylight

- **Go to your nearest Community Emergency Hub**



Sign up for emergency alerts



EMERGENCY ALERTS AND NOTIFICATIONS

When emergencies happen, be the first to know. Stay informed with **AlertSeattle** to receive real-time, official notifications from the City of Seattle. This is a free service.

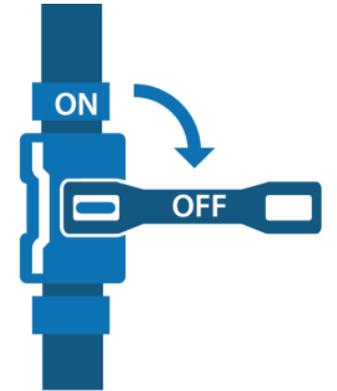
alert.seattle.gov

*You can choose to receive **Emergency Alerts or Community Notifications**, such as:*

- Severe weather
- Safety
- Health
- Special events
- Utility disruptions
- Major traffic disruptions
- Emergency preparedness
- Test messages

Disaster skills training

- Learn how to use a fire extinguisher
- Check on and control utilities
 - Shut off water at the main house valve
 - Shut off natural gas ONLY if necessary
- Construct an emergency toilet
- Learn basic first aid skills
- Light Search & Rescue
- Stop the Bleed
- Sign up for classes at www.seattle.gov/emergency



Questions?

Thank you for attending- you'll be happy you prepared ahead of time when the next disaster strikes!



Seattle
Office of Emergency
Management



Important Links

www.Seattle.gov/emergency-management

OEM@Seattle.gov

Carl.Leon@Seattle.gov

www.SeattleEmergencyHubs.org

Unofficial:

[Youtube.com/@SeattlePrepares](https://www.youtube.com/@SeattlePrepares)

www.n7kuw.com/Handouts/

(hint: download handoutlist.pdf first)

