



Kanazawa Flooding
Hazard Map App
(Nigemasshi)

Kanazawa City

Guide to Safe Evacuation During Flooding (Floods and Tsunamis)

Flood Hazard Map

Please use this booklet for safe evacuation

POINT 01

Check the dangerous areas

Refer to the flooding hazard map to check whether your house and the surrounding areas are in danger of flooding.



POINT 02

Obtain disaster prevention information

Make efforts to obtain disaster prevention information in advance when a disaster is forecasted, such as the approach of a typhoon.



POINT 03

Know how to evacuate

Check evacuation timing, evacuation locations and emergency items needed according to the evacuation information released.



Evacuation Action Flow During Flooding

When you are in an area at a risk of flooding or sediment disaster, you must **evacuate**. Check the disaster risk of your house and evacuation action by yourself.

Is your house included in the following area? ▶ Check the hazard map.



Riverbank erosion



River overflow



Sediment disaster alert area

Yes

No

Is the area where your house is located flooded? ▶ Check the hazard map.

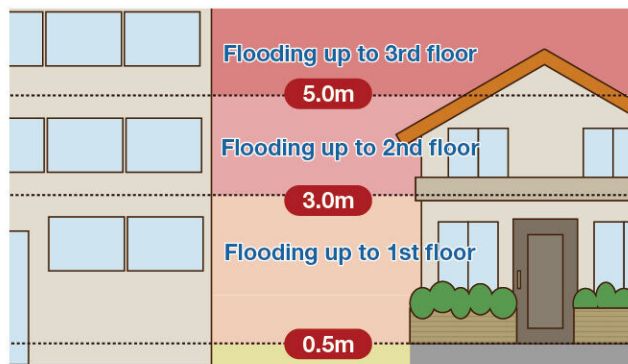
Yes

No

Is the highest floor flooded? ▶ Check the hazard map.

Yes

No



Early evacuation

Evacuate out of the estimated flooding area **at alert level 3**

To designated urgent evacuation places

To relative's or acquaintance's houses



Discuss evacuation places with your family on a daily basis.

Evacuation

Evacuate outside of the estimated flooding area **before alert level 4**

Exception

When the following three conditions are confirmed:

Taking shelter inside (vertical evacuation) is also possible.

Evacuate to a safe place in the building.

Three Conditions

1. You are outside the alert area for riverbank erosion, river overflow or sediment disaster.
2. The highest floor of your house will not be flooded.
3. You have enough food and drink stock to survive until the water recedes.



Notes During Evacuation !

- When you evacuate to your relative's or acquaintance's house, check the hazard map on the municipal website.
- When there is a risk of sediment disaster or it is dangerous to leave your house, move to the 2nd floor or a higher room on the opposite side of the slope.
- When outside of the house is dangerous and your house has already been flooded, evacuate vertically.

(For reference)

Types of evacuation location

Temporary Evacuation Locations

Determine locations for temporary evacuation through discussion with your family, co-workers or community disaster management organizations. Temporary evacuation areas can be places such as parks, open spaces and community centers.

Emergency Evacuation Shelters Designated by the City

Designated emergency shelter: place to evacuate to protect you from the risk of a disaster.

Schools and community centers, etc.








These places can be shelters. Disaster victims can stay in these shelters for a certain period when their houses are damaged due to a disaster.

Parks and squares

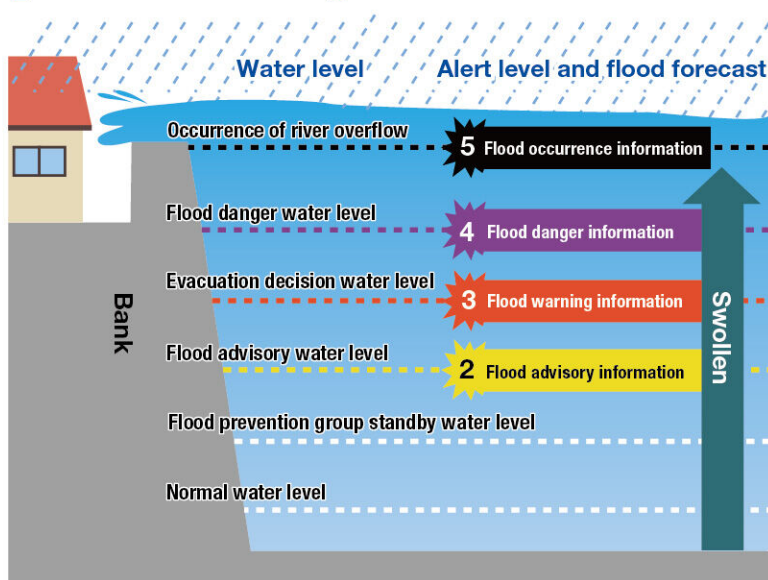


Alert Level and Evacuation Actions

If you feel that you are in danger, start to evacuate voluntarily even if no instruction has been issued from the city.

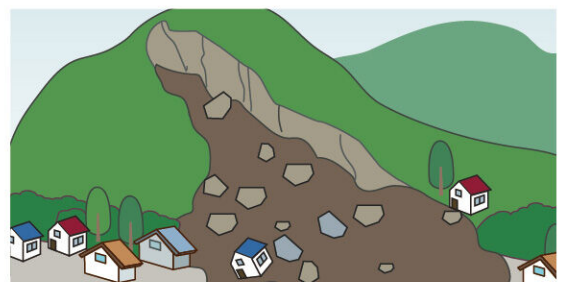
Alert level	Evacuation Information from Kanazawa City	Severe Weather Terminology by the Ministry of Land, Infrastructure, Transport and Tourism and Japan Meteorological Agency	Actions You Should Take
Level 5	Emergency Safety Measures	Flood occurrence information Heavy rain emergency warning	<p>Your life is in danger! Ensure safety at once.</p> <ul style="list-style-type: none"> Disaster occurred or is imminent. Your life is at risk, ensure safety immediately! 
~~~~~ Evacuate before Alert Level 4. ~~~~~			
<b>Level 4</b>	<b>Evacuation Instruction</b>	<b>Flood danger information</b> <b>Sediment disaster warning information</b>	<p><b>Everyone must evacuate</b></p> <ul style="list-style-type: none"> <li>Evacuate to a safe place to protect your life.</li> <li>If your house is safe, ensure safety in your house.</li> <li>If you feel that going outside is dangerous, stay in the present place and ensure safety.</li> </ul> 
<b>Level 3</b>	<b>Evacuation of the elderly and vulnerable</b>	<b>Flood warning information</b> <b>Flood warning</b> <b>Heavy rain warning</b>	<p><b>Elderly and vulnerable people must evacuate</b></p> <ul style="list-style-type: none"> <li>Those who need time to evacuate must evacuate to a safe place.</li> <li>Other people should start preparing for evacuation and evacuate early when they feel danger.</li> </ul> 
<b>Level 2</b>	—	<b>Flood advisory information</b> <b>Flood advisory</b> <b>Heavy rain advisory</b>	<p><b>Confirm your evacuation action</b></p> <ul style="list-style-type: none"> <li>Reconfirm your evacuation route and how to evacuate referring to the hazard map.</li> </ul> 
<b>Level 1</b>	—	<b>Early advisory</b>	<p><b>Prepare for disasters</b></p> <ul style="list-style-type: none"> <li>Pay attention to disaster prevention weather information.</li> </ul> 

## Water Level Change and Flood Forecast



## Watch Out for Sediment Disasters Too!

When heavy rain falls, there is a risk of a sediment disaster. Buildings may be crushed by a landslide or washed away.



Indication on the map

**Sediment disaster special alert area:**

High risk area within the special alert area for sediment disasters



**Sediment disaster alert area:**

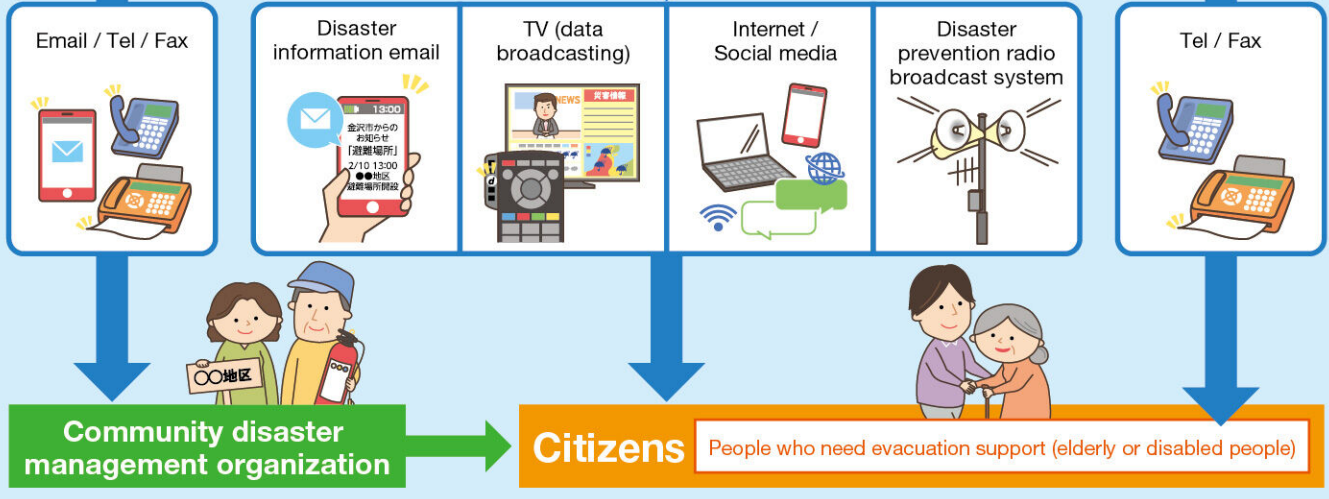
Area that will be damaged by a sediment disaster if it occurs



# How to Obtain Disaster Prevention Information

**Kanazawa City**

Evacuation information is provided in various ways. Please obtain the information via a method suitable to you.



**new!**

## Kanazawa Flooding Hazard Map App (Nigemasshi)

Displays the hazard map for flooding, inland flooding and tsunamis, open or closed shelters, and indication of flood water level at the current location as a camera view on your mobile phone.



### Information Sent to You

#### Disaster information service (kanazawa-bousai.com)

Pre-registration

Weather alerts, evacuation directives, etc. are sent to you.

<http://kanazawa-bousai.com/top.php>



#### Kanazawa City Official Social Media LINE, X (former Twitter)

Pre-registration

LINE

X (former Twitter)  
@CityofKanazawa



#### Yahoo! Disaster Prevention News App

Pre-registration

Evacuation information etc. is sent to you via push notification.



#### Emergency Information Email

*No registration required.

Emergency information is sent to mobile phones at the same time.

### Information collection

#### Hazard Map

You can check the hazard map for flooding, tsunamis and sediment disasters.



#### Kanazawa Rainfall Information

You can check the rainfall amount and river water levels in the city.



#### Disaster Prevention Wireless Information (AlertQue)

If you miss the information, access it from here.  
<https://city-kanazawa.alertque.net/>



#### Ishikawa Prefecture River Information System

You can check the rainfall amount and river water levels in the prefecture.



#### Japan Meteorological Agency "Kikikuru" (risk distribution map)

You can learn the real time danger level of a disaster.



#### River Flood Information (Ministry of Land Infrastructure, Transport and Tourism (MLIT))

You can check the rainfall amount and river water levels throughout the country.





# Must-do's for Evacuation

**1** Follow the instructions from the city, fire department and police department when evacuating. Obtain information from the radio, TV and public broadcasting vehicles.



**2** Please carry emergency items in a backpack and leave both hands free.



**3** High boots are dangerous: you cannot walk well in deep water, since they fill with water. Going bare foot is also dangerous. Wear sports shoes with laces.



**4** Call on neighbors to evacuate and help each other. Support sick people and those who cannot walk to evacuate.



**5** The person at the front of the group should carry a long stick to search for ditches and gutters.



**6** If the water depth is 50cm or more, it may be dangerous to evacuate. Move to a nearby safe building.



**7** Do not travel by car or bicycle. You may be swept away or trapped in the vehicle.



# Emergency Items and Stock Items Checklist

## Emergency Items

Prepare necessary items depending on your and your family's condition.



Prepare 3 days' worth of emergency items, taking your family members into consideration, and store them in the place where you can access them easily.

- |                                                                                     |                                                                                         |                                                                      |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| <input type="checkbox"/> Water *500ml×3 bottles per person                          | <input type="checkbox"/> Flashlights                                                    | <input type="checkbox"/> Toiletries / Tooth brushes                  |
| <input type="checkbox"/> Food (requiring no cooking)<br>*3 meals per person per day | <input type="checkbox"/> Mobile radio                                                   | <input type="checkbox"/> Masks                                       |
| <input type="checkbox"/> Helmets / Disaster hoods                                   | <input type="checkbox"/> Spare batteries /<br>Mobile phone chargers                     | <input type="checkbox"/> Portable toilet                             |
| <input type="checkbox"/> Clothes / Underwear                                        | <input type="checkbox"/> First aid kit<br>(band-aids, bandages, regular medicine, etc.) | <input type="checkbox"/> Women's sanitary products /<br>Garbage bags |
| <input type="checkbox"/> Rainwear                                                   | <input type="checkbox"/> Disposable pocket warmers,                                     | <input type="checkbox"/> Valuables (Cash, ID, etc.)                  |
| <input type="checkbox"/> No-lace shoes that are easy<br>to walk in                  | <input type="checkbox"/> Cotton work gloves                                             | <input type="checkbox"/> Towels                                      |

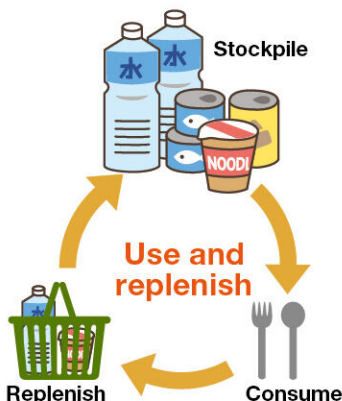
### Family living with elderly persons

- |                                                                            |                                                               |
|----------------------------------------------------------------------------|---------------------------------------------------------------|
| <input type="checkbox"/> Chronic disease medicine /<br>Medication notebook | <input type="checkbox"/> Extra reading glasses                |
| <input type="checkbox"/> Hearing aid / Walking stick                       | <input type="checkbox"/> Dentures /<br>Denture cleaning agent |
| <input type="checkbox"/> Adult paper diapers                               |                                                               |

### Family with small children

- |                                                             |                                          |
|-------------------------------------------------------------|------------------------------------------|
| <input type="checkbox"/> Liquid milk, disposal baby bottles | <input type="checkbox"/> Child tableware |
| <input type="checkbox"/> Baby food                          | <input type="checkbox"/> Child shoes     |
| <input type="checkbox"/> Disposable diapers /<br>Baby wipes |                                          |

## Emergency Stocks



Lifelines such as electricity and city water may be cut off due to flooding. Stockpile emergency items, using and replenishing them as needed.

- |                                                  |                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Drinking water          | Prepare 3 liters per person per day                                                                                                                                                                                                                                                                                                                                |
| <input type="checkbox"/> Fuel                    | Table-top stove, mobile stove, briquette fuel, etc.                                                                                                                                                                                                                                                                                                                |
| <input type="checkbox"/> Emergency food          | Dry biscuits, canned food, retort pouch food, supplements, etc.                                                                                                                                                                                                                                                                                                    |
| <input type="checkbox"/> Other daily necessities | Non-drinking water (to be kept in bathtubs or washing machines), plastic tanks, blankets, sleeping bags, toiletries, toilet paper, pots, kettles, buckets, disposable pocket warmers, candles, tools such as ropes and shovels, dry shampoo, newspaper, vinyl sheets, cloth packing tape, cling wrap, garbage bags, portable toilet, pet food (if necessary), etc. |



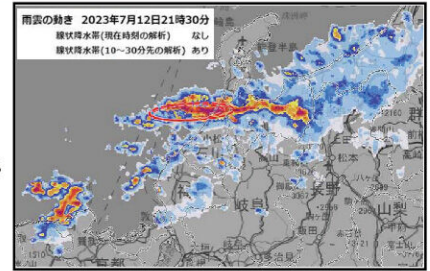
# Weather Information Related to Disasters

## Record-breaking Heavy Rain Information

Information related to sediment disaster, flooding or small or medium-sized river overflow. Heavy rain that occurs once every several years is strongly associated with disasters. You may be one step away from a disaster, or it may already be happening.

*Announcement criteria (Japan Meteorological Agency): In Ishikawa Prefecture - when 100mm of rainwater is measured in one hour.

<Recent Announcement>  
August 4, 2022, around Komatsu City and Hakusan City



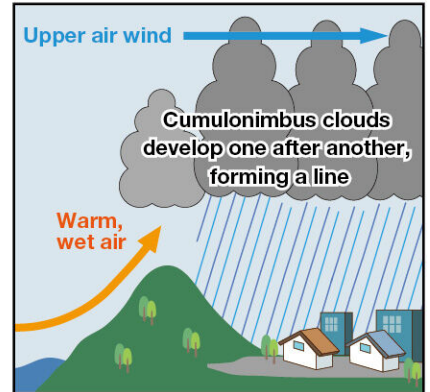
Linear rain band generation status by Japan Meteorological Agency website

## Weather Information Indicating Significant Heavy Rainfall

When linear rainbands occur and the risk of disaster is rapidly increasing. That's why the key words "linear rainband" are used to explain the situation. This information is provided in situations equivalent to alert level 4 or higher.

<Recent Announcement>  
Heavy rain on July 12-13, 2023, around Kahoku City, Tsubata Town and Uchinada Town

### Linear rain band occurrence mechanism



## Linear Rainbands




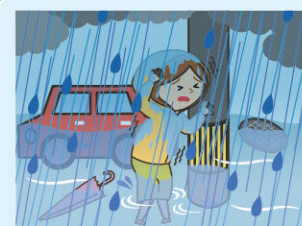
Cumulonimbus clouds pass through the same area or stay there for several hours forming a line. Prepare for a disaster and pay attention to the information about heavy rain.

<Recent Announcements>  
9:30 pm on July 12, 2023, around Kahoku City, Tsubata Town and Uchinada Town

# Strength of Rain and Wind




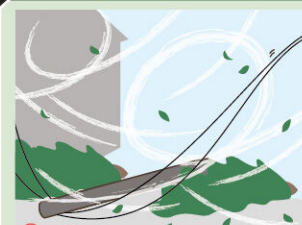
## Rainfall and Environmental Conditions

<Recent Announcements>  
July 12, 2023, Kahoku City, Maximum rainfall amount: 85.5mm/hr  
August 4, 2022, Kawachi area in Hakusan City, Maximum rainfall amount: 108.0mm/hr

Heavy rain	Very heavy rain	Drenching rain	Torrential rain
			
20-30 mm/hr	30-50 mm/hr	50-80 mm/hr	80 mm-/hr
You become wet even under an umbrella. Difficult to see even with car wipers on fastest setting.	Roads become full of water like a river.	An umbrella is useless. Rainwater gushes from manholes. Visibility worsens due to water spray.	

## Wind Strength and Environmental Conditions

<Recent Announcement >  
September 4, 2018, Kanazawa City, Maximum wind velocity of 44.3m (Typhoon No.21)

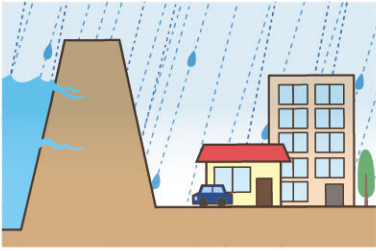
Slightly strong wind	Strong wind	Very strong wind	Extremely strong wind
			
10-15 m/s / hr	15-20 m/s / hr	20-30 m/s / hr	30- m/s / hr
It is difficult to walk against the wind. You cannot use an umbrella.	You cannot walk against the wind. Some people may fall down.	It is difficult to stand without holding something.	It is dangerous to move outside and trucks running on the road may be blown over.



# River Flooding

- River flooding occurs due to riverbank destruction or river overflow when river water increases.
- It is necessary to evacuate early out of areas where there is a risk of house collapse or houses being washed away.

## Great Damage Due to Riverbank Breakage



When river water increases during heavy rain, water pressure is applied to riverbanks.



When a riverbank becomes unable to bear the water pressure, part of the riverbank starts to collapse.



The area of collapse will immediately begin to widen, allowing water to flow out vigorously into and around buildings.

## Be Careful of Building Destruction and Washout

### Riverbank erosion



(indicated on the map)  
The bank may be broken and buildings may be destroyed or washed away.



### River overflow



(indicated on the map)  
Buildings etc. may be destroyed and washed out due to river overflow.



# Inland Water Flooding

- Inland water flooding occurs when rainwater is not drained from storm sewers, pump stations or drains.
- In the areas for which inland water flooding is predicted or has occurred before, roads may be flooded.

## Be Careful of Water Gushing from Manholes



During heavy rain, water gushes from manholes and manhole covers may come off. Please stay away from manholes.

## Be Careful of Flooded Underpasses!



Underpasses are roads that cross beneath railways or other roads. They are lower than the surrounding areas and rainwater accumulates there quickly. It is dangerous to pass through when they are flooded. Take a detour to avoid danger.

## Be Careful of Flooding When You are Underground



Outside conditions are not visible while underground



Doors will not open due to water pressure



It becomes difficult to escape



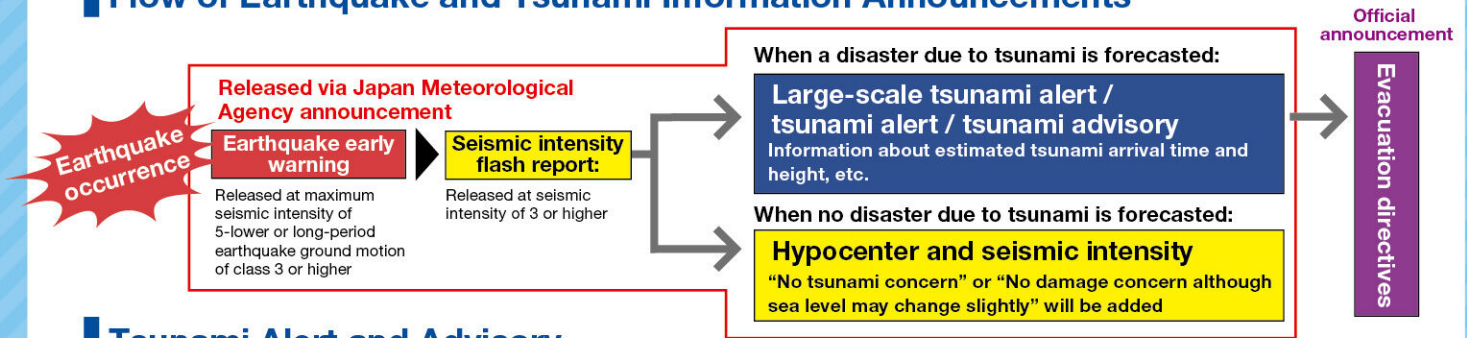
Elevators cannot be used



# When an Earthquake and Tsunami Occur Simultaneously

- There is a possibility that multiple disasters such as a flood, earthquake and tsunami can occur simultaneously. Check the estimated inundation areas due to tsunami as well.

## Flow of Earthquake and Tsunami Information Announcements



## Tsunami Alert and Advisory

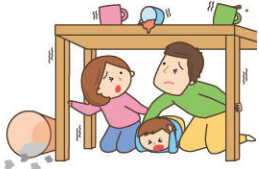
When an earthquake occurs, the Japan Meteorological Agency releases a large tsunami alert (special alert), tsunami alert or tsunami advisory by area within 3 minutes (2 minutes for some earthquakes) by estimating the height of the tsunami based on the scale and position of the earthquake.

Type of tsunami forecast (announcement criteria)	Height of estimated tsunami		Forecasted damage and actions to take
	Numerical classification (Height)	In the case of a huge earthquake	
Large tsunami alert (3m or higher)	Over 10m (10m-)	Huge	If a huge tsunami occurs, wooden houses are destroyed and washed away, and people are caught in the currents caused by the tsunami. People on the coastline and along riverbanks must evacuate immediately to safe places such as higher ground or higher buildings.
	10m (5m-10m)		
	5m (3m-5m)		
Tsunami alert	3m (1m-3m)	High	Flooding occurs and people are swept away by the tsunami. People on the coastline and along riverbanks must evacuate immediately to safe places such as higher ground or higher buildings.
Tsunami advisory	1m (20cm-1m)	(Not indicated)	Aquaculture rafts may be washed away and small boats may be capsized. Get out of the sea immediately and leave the coastline.

## Evacuation Action When a Tsunami Occurs


**STEP 01** **Protecting yourself from an earthquake** Earthquake early warning

- Protect yourself from falling objects due to the earthquake.
- Calm down and obtain tsunami information from the TV or radio.




**STEP 02** **Evacuate to shelters, etc.** (Large) tsunami alert and tsunami advisory Evacuation directives

- People in the tsunami disaster alert area must evacuate outside of the area!
- Evacuate to higher places such as higher ground or shelters.



**STEP 03** **Stay in the shelter**

- Do not return to your house until an alert or advisory is removed.
- Keep away from the coastline and rivers.



**STEP 04** **Evacuation to shelters(indoor), etc.**

- If your house is damaged, do not return to your house; evacuate to a shelter designated by the city or an acquaintance's house, etc.



# My Family's Timeline



## Disaster risk check

- Flood of depth ___m     Inland water flood of depth ___m
- Area where buildings are estimated to collapse
- Sediment disaster (special) alert areas



## Evacuation plan

Alert Level

Evacuation information

Disaster prevention weather information

### My family's evacuation actions

Level 1

Check the required actions   
Write down your evacuation actions

- Reconfirm your emergency items and stock items.
- Check weather information by TV and the internet.
- Confirm the plans of family members.
- Purchase the items necessary for evacuation.
- Take items that may be swept away such as flowerpots and laundry poles into the house.

Level 2

Flood advisory information  
Flooding advisory  
Heavy rain advisory

- Check the rain cloud radar and river water level via TV or the Internet.
- Charge mobile phones.
- Reconfirm the shelter and evacuation route.

Level 3

Evacuation of the elderly, etc.

Overflow warning information  
Flood alert  
Heavy rain alert

- Start evacuation early! Evacuate to _____.
- Inform your family members of your evacuation destination.
- Check the evacuation information.
- Start transferring your family's valuables to the 2nd floor, etc.

Level 4

Evacuation Instruction

Overflow danger information  
Sediment disaster warning information

- If your house is safe, secure safety in your house (vertical evacuation).
- If your house is dangerous, evacuate to _____.

Level 5

Emergency Safety Measures

Flood occurrence information  
Heavy rain special alert

- Ensure personal safety
- 
- 

If you fail to escape, evacuate to a higher building or a higher place!

# Contacts in Emergency/ Disaster

## Tel No. in Emergency / Disaster

**Fire** Fire / Ambulance / Rescue ☎ **119**

**Police** Crime / Security / Traffic accidents ☎ **110**

**Road** (Road Maintenance Section, Kanazawa City) ☎ **076-220-2321**

**Sewage/ City water** (Water & Energy Center, Kanazawa City) ☎ **0120-328-117** (Nighttime: 076-220-2281)

**Power failure / Electric pole or cable damage** (Hokuriku Electric Power Transmission & Distribution Company) ☎ **0120-837119**

**Gas leakage emergency dial** (Kanazawa Energy Co., Ltd.) ☎ **076-220-2281**



## If a telephone is not available

In the case of a large-scale disaster, the use of general telephones and mobile phones is restricted. Please use NTT Disaster Emergency Message Dial or the disaster message board system of your mobile phone carrier to contact your family or friends.

**Disaster Emergency Message Dial** ☎ **171**

Please follow the audio guidance.

**Disaster Emergency Message Board** **WEB171**

- NTT West ..... <https://www.web171.jp/>
- NTTdocomo ..... <http://dengon.docomo.ne.jp/>
- au (KDDI) ..... <http://dengon.ezweb.ne.jp/>
- SoftBank ..... <http://dengon.softbank.ne.jp/>

