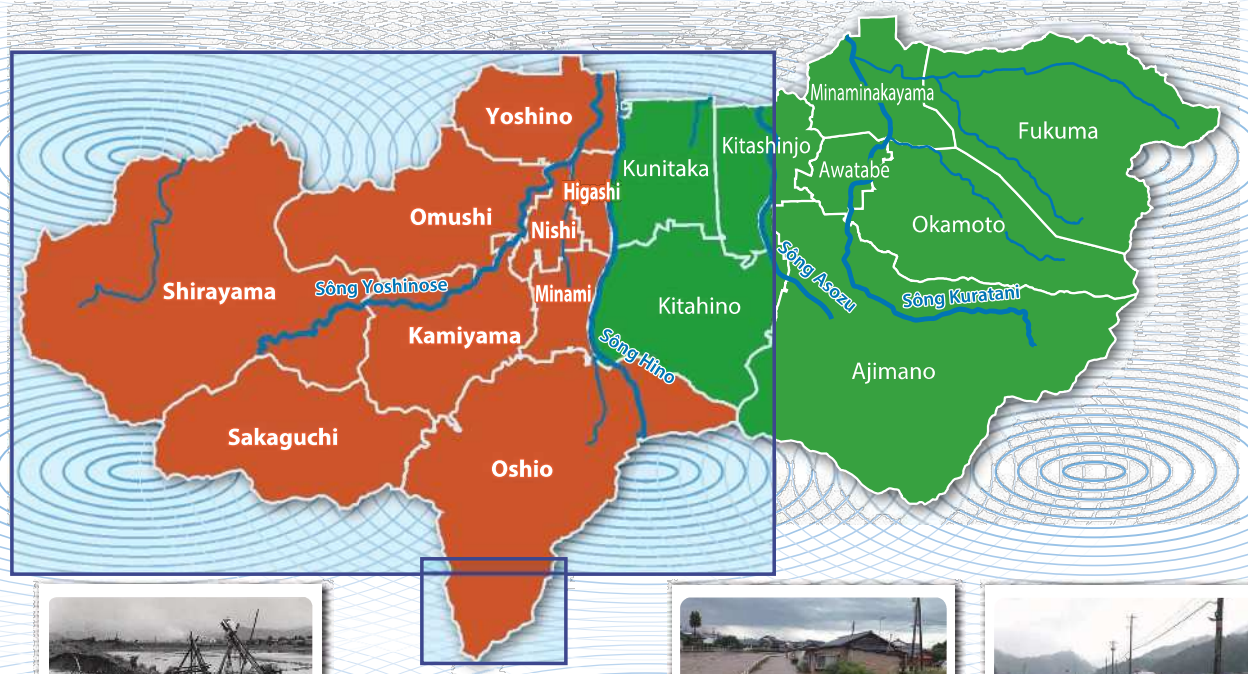


# ECHIZEN CITY Flood Hazard Map

Special Edition

~Protect yourself from floods~

Sakaguchi/Shirayama/Higashi/Nishi/  
Minami/Kamiyama/Yoshino/Omushi/Oshio District



ECHIZEN CITY

Created in May 2021

## 1. Understanding Disasters

### 1-1. Past floods in Echizen City

During the torrential rains in Fukui in July 2004, various parts of the city, especially the former Imadate area were flooded. Also, the torrential rains in the eastern part of Japan in July 2012 caused flooding in Awatabe, Okamoto, and Ajimano districts.

Torrential rain in Fukui (2004)		Torrential rain in eastern Echizen (2012)		Damage to houses (buildings)						
	Awatabe		Minowaki		Inundation above floor level	Inundation below floor level	Partial damage	Half collapse	Complete collapse	Total
Torrential rain in Fukui		Torrential rain in eastern Echizen			592	271	23	5	2	893
					50	174	7	2	0	233

### 1-2. Potential disasters and damage caused by heavy rain

#### Flood

##### Flood from rivers

Heavy rains cause river water level to rise, overflow and flood.

##### Flood from inland waters

A short period of heavy rainfall causes flooding beyond the processing power of the drainage channels.

##### Dam burst

When it rains for a long time, the soil on the bank of the reservoir loosens and collapses, causing the reservoir to burst.

#### Flooding of roads

If the engine stops or if the car is immersed in water, you may not be able to get out of the car.

#### Inundation above floor level / Inundation below floor level

The water that flows in is muddy, and even after the water recedes, sediment and sludge accumulate, and therefore, cleaning up is difficult.

#### Destruction of houses

Due to the flow of water and other factors, houses may collapse, posing a danger to life.

#### Landslides disaster [In case of any of these signs, evacuate immediately!]

##### Collapse of steep slopes (Landslip)

- Gravel comes falling down from the cliffs
- There are cracks in the cliff
- Water suddenly gushes up from the cliff

##### Debris flow

- Rumbling of a mountain or sound of trees cracking
- Muddy river, driftwood in river water
- Despite continuous rain, the water level in the river drops drastically
- The soil smells rotten

##### Landslide

- There are cracks in the ground
- Water in ponds and wells suddenly decreases or becomes muddy
- Part of the ground collapses or rises

Extensive damage was caused by the "torrential rain in July, 2018 (western Japan)" and the "typhoon in eastern Japan in 2019 (Typhoon No. 19)". One of the factors that caused the damage was "low evacuation rate" or "delayed escape". Preconceptions such as "the damage was never expected to spread this far," or "We have had heavy rains before, but never had to evacuate," were given as reasons for not evacuating. Learning from the experience of the torrential rain in July, 2018 (torrential rain in western Japan), "alert level" was introduced to make it easier for residents to intuitively understand the actions they should take using disaster prevention information released by local governments. Let's be aware of how we can protect our lives and be prepared to take the best possible measures to evacuate.

## 2. Preparing Yourself on a Daily Basis

### 2-1. Contemplate disaster prevention and evacuation on a regular basis

Set up evacuation routes to avoid flooded areas.

Next, check the evacuation centers near your home.

Walk along the evacuation routes to check if the routes are actually safe.

Get the whole family involved in disaster prevention drills.

### 2-2. Check your house and surroundings as a measure of disaster prevention

It is dangerous to check after torrential rains have intensified. Check it on a daily basis and check the areas that have been already been identified.

#### Roof

- Antenna
- Galvanized iron sheet
- Roof tiles

#### Windows

- Window frames
- Rattling of sliding storm shutter

#### Rain gutter

- Clogging due to fallen leaves and garbage
- Seams, peeling, decay

#### Others

- Garbage cans
- Plant pots
- Concrete block wall

#### Veranda

- Plant pots
- Clotheslines

#### Outer walls

- Cracks in outer walls

#### Drain

- Clogging due to garbage

### 2-3. Emergency supplies that include items useful against infectious diseases

#### Valuables

- Cash (including small change)
- Seal
- Documents such as insurance card (copy is fine)

#### Clothes (according to season)

- Underwear
- Socks
- Mittens, gloves
- Sweater, rainwear
- Cap
- Helmet
- Items such as lap blanket

#### Medical supplies

- Household medicines
- Disinfectant
- Health-care record book
- Mask
- Items such as bandage

#### Accessories and gadgets

- Flashlight
- Portable radio set
- Spare battery
- Cell phone and charger
- Mat
- Newspapers
- Items such as chopsticks, forks

#### Face washing products

- Soap
- Dental care kit
- Items such as towels

#### Water and food items

- Drinking water
- Food items (canned goods, cup noodles, and other preserved foods)
- Items such as snacks for kids

#### Baby products

- Milk powder
- Feeding bottle
- Diapers
- Baby powder
- Toys and so on

#### ~Daily monitoring activities~

Through daily monitoring activities in Echizen City, information has been collected about people who require assistance for evacuation (such as the elderly and those with disabilities), and a register of names (register of names who require assistance for evacuation) has been created. In the event of a disaster, the register will be used to provide evacuation support such as communicating disaster information and checking safety. If you would like to be registered in the list of those who need assistance for evacuation, please contact the agencies listed on the right.

Division in Charge	Telephone Number
Disaster Prevention and Crisis Management Division	0778-22-3081
Social Welfare Division	0778-22-3004
Longevity and Welfare Division	0778-22-3784

## 2. Preparing Yourself on a Daily Basis

### 2-4. Creating My Timeline

Disasters caused by typhoons and heavy rains can be predicted in advance. Consider your evacuation actions in advance based on evacuation and weather information, and create My Timeline.

Points for creating My Timeline

- Confirm the evacuation timing from the evacuation and weather information
- List the actions to be taken before evacuation begins
- List the precautions to be taken during evacuation

#### Check status of your home

Check hazard map to find out if your house is in danger

Flood depth ~

Located in a landslide (special) danger zone

#### Means of transportation to evacuation site

minutes on foot

minutes by car

#### People who can assist you in evacuating

1 Name

2 Name

#### Place to evacuate

\*Check if it is suitable in case of floods

Place to evacuate

#### Estimated time of typhoon approach

3 days before

2 days before

1 day before

12 hours before

6 hours before

#### Alert Level

Alert Level 1

Alert Level 2

Alert Level 3

Alert Level 4

Alert Level 5

#### Echizen City Information

Typhoon information

Heavy rain advisory

Flood advisory

Flood advisory information

Heavy rain warning

Flood warning

Flood alert information

Flood risk information

Landslide alert information

Heavy rain emergency warning

Flood occurrence information

#### Reference information from authorities such as the Japan Meteorological Agency

Typhoon-related weather information

#### Summarize what you need to do to mitigate damage and to evacuate.

(Example) • Charge cell phones and place sandbags in the places of your home that may be flooded.

• Prepare necessary items for evacuation.

#### Discuss with your family the precautions you should take when evacuating.

(Example) • If there are imminent heavy rains at night, evacuate to a shelter.

#### Lives in Danger.. Immediately Ensure Safety!

If evacuation is delayed...

the disaster has already occurred.

Take the best course of action to save your life!

It is rather dangerous to evacuate outside. Secure yourself in a safe place in the building you are currently in!

## Source of Information

Information source - QR code	Details	Information source - QR code	Details
	Echizen City website		Weather alerts, information from river surveillance cameras, landslide risk information and so on.
	Fukui disaster prevention signal		Public transportation, utilities, disaster prevention and evacuation information for the area around your current location
	Fukui local meteorological observatory		Displays road information, flood hazard maps, potential flood zones, evacuation sites in Echizen City among other information.

### Disaster Emergency Message Dial (171)

Safety Confirmation Method	Disaster Emergency Message Dial (171) is a "voice message board" (to check safety of relatives and friends) in the event of a major disaster. Messages can be recorded and played on ordinary telephones, public telephones, and cell phones.
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#### When recording a message

People in the disaster area should enter their own phone numbers, and people outside the disaster area should enter the phone numbers of people in the disaster area, beginning with the area code.

1 → (0000)□□-□□□□ → Record the message (30 seconds or less)

#### When playing a message

People in the disaster area should enter their home phone numbers, and people outside the disaster area should enter the phone numbers of people in the disaster area, beginning with the area code.

2 → (0000)□□□□-□□□□ → Listen to the message

#### Column

Echizen City has also created hazard maps for landslides and earthquakes. Check the information you need.

##### Landslide Hazard Map

Landslips, debris flows, landslides are listed according to selected towns.

##### Earthquake Disaster Prevention Map

Three categories: vulnerability to ground shaking, risk level of the area, and liquefaction risk level.

##### Reservoir Hazard Map

Potential flood of reservoirs are listed for each town.

Issued by: Disaster Prevention and Crisis Management Division, General Affairs Department, Echizen City  
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## 3. Understanding Evacuation

### 3-1. Evacuation behavior according to the Alert Level

Risk Level	Low					High
Alert Level	Alert Level 1	Alert Level 2	Alert Level 3	Alert Level 4	Alert Level 5	Alert Level 5
Evacuation Information			Evacuation of elderly people and others	Evacuation order	Ensuring safety during an emergency	Ensuring safety during an emergency
Course of Action Citizens Should Take	Pay attention to latest information.	Get the latest weather information. Confirm the location of regional evacuation sites (Designated evacuation shelters)	Evacuate the elderly and other potential victims from dangerous places! Call out to neighbors and evacuate in groups!	Everyone to evacuate from dangerous places! Go to evacuation shelters as soon as possible! Evacuate to a safe place of refuge!	Lives in danger..Immediately ensure safety Move to higher places as much as possible to avoid flooding! Move as far away as possible from places that are at a risk of landslide disasters!	Lives in danger..Immediately ensure safety Move to higher places as much as possible to avoid flooding! Move as far away as possible from places that are at a risk of landslide disasters!
Weather Information	Early caution information (possibility of alert level)	Heavy rain advisory Flood advisory	Heavy rain warning, flood alert	Landslide alert information	Heavy rain emergency warning (heavy rain occurring once in decades)	Heavy rain emergency warning (heavy rain occurring once in decades)
Surrounding Circumstances						
Estimation of Disaster Occurrence						
River flood Information		Flood advisory information	Flood alert information	Flood risk information	Flood occurrence information	Flood occurrence information
Real-time Heavy Rain and Flood Risk Map		Warning	Alert	Very dangerous	Extremely dangerous	Extremely dangerous

The chart shows evacuation behavior and is scheduled to be published in March 2021. The order in which the information is released may vary depending on the rainfall and other circumstances. Be proactive in gathering all types of latest information and use your own judgement in evacuating.

Classification	Alert level	Siren	If you cannot hear the broadcast, you can call the following exclusive numbers to reconfirm the details.
Evacuation of elderly people and others	Alert level 3	Three or more sirens blaring for approximately 40 seconds	☎ 0778-21-0088
Evacuation order	Alert level 4	Six or more sirens blaring for approximately 20 seconds	
Ensuring safety during an emergency	Alert level 5	12 or more sirens blaring for approximately 10 seconds	

### Flood Warning Level, Evacuation Judgement Level, Flood Risk Level at Water Level Gauging Station

The risk of flooding varies from river to river. At the water level gauging stations of major rivers in Echizen City, water levels that indicate flood or water levels that indicate risk of flood are determined. Water level gauging stations are marked with on the map.

Water level gauging station		Flood Warning Water Level (m)	Evacuation Decision Water Level (m)	Flood Risk Water Level (m)
Yoshino River	Iehisa	1.90	2.50	2.70
	Kamioda	2.40	2.50	3.20
Kuratani River	Awatabe	1.80	1.90	2.50
Hattori River	Higashishozakai	1.50	1.80	2.20
Asazu River	Kita	2.30	2.50	2.80
Hino River	Nakahirabuki	3.50	4.00	4.40

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#### Explanation of Water Level

#### Flood Risk Water Level

Water level indicating that flood risk information should be issued

#### Evacuation Judgement Level

Water level indicating that flood alert information should be issued

#### Flood Warning Water Level

Water level indicating that flood fighting corps should be on standby for mobilization

## 3. Understanding Evacuation

### 3-2. Understanding Evacuation Behavior

There are two types of evacuation: "evacuation to a safe place outside your home" and "moving to a safer place inside your home, such as the second floor." Evacuation methods vary depending on region and situation. Depending on the timing of evacuation, use the most appropriate method, especially if you need to move during heavy rain or at night, because there is a risk of getting injured while evacuating outside your home. Also, consider measures against infectious diseases when deciding whether to evacuate outdoors or securing your safety indoors.

#### Evacuating your home (Moving out of your home)

Evacuation shelters and so on

Horizontal movement

Evacuate to safe shelters if it is dangerous to be in an area such as one near a river where flood depth increases or an area where landslides may occur. In principle, evacuate away from your home before the disaster occurs.

#### Staying inside your home (secure safety indoors)

Vertical movement

Stay inside your house if leaving your house is dangerous or if the flood depth is low and you can move to places such as the second floor of your own house.

### 3-3. Evacuation: Caution Points

#### If there is no shelter nearby, temporarily evacuate to the upper floors of a sturdy building in your neighborhood.

#### Evacuation at night is very dangerous because it is difficult to see your surroundings. As far as possible, evacuate before dark.

#### Those who need more time to evacuate, such as the elderly, children, people with diseases, and people with physical disabilities, should start evacuating as soon as possible. Let's work together as a community to help those who need assistance with evacuation.

#### Use your judgement when evacuating! Be sure to evacuate as early as possible based on evacuation and weather information.

#### Evacuation order is issued when danger is imminent, so evacuate as soon as possible.

#### When evacuating, wear comfortable clothing to make movement easy. As far as possible, evacuate in groups of at least two.