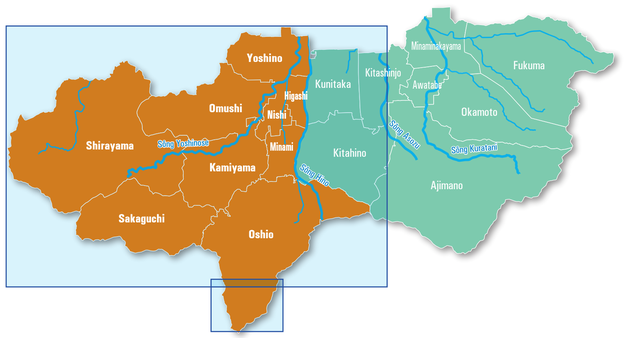
# ECHIZEN CITY

Special Edition

# Flood & Inland Flooding Hazard Map

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

~ Protect Yourself from Water Disasters ~




ECHIZEN CITY

Created in March 2026

## Mechanism of Inland Flooding

Rainfall Condition for This Hazard Map: 130 mm/h

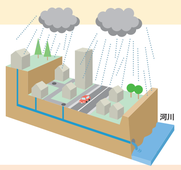
**Inland Flooding** — Flooding that occurs when stormwater cannot be drained from urban areas, such as through sewers or roadside gutters, into rivers. It has a high occurrence frequency and poses a risk of flooding damage developing within a short time.

**Flooding** — Water inundation caused by river water levels rising and overflowing levees or levee breaches. While less frequent, it carries the risk of widespread flooding damage.

### Hourly rainfall

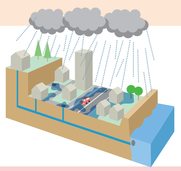
| Hourly rainfall | Rainfall | Illustration | Caution |
|---|---|---|---|
| 10–20 mm | Moderately heavy rain | Steady rainfall | Caution is advised if rainfall continues for an extended period. |
| 20–30 mm | Heavy rain | Torrential Rain | Roadside drains, sewers, and small rivers may overflow, and minor landslides may begin. |
| 30–50 mm | Very Heavy rain | Sudden intense downpour | Landslides and slope failures become more likely. Evacuation preparations are necessary. |
| 50–80 mm | Extremely heavy rain | pouring down like a waterfall | Water may gush out of manholes, and debris flows are more likely to occur. |
| 80 mm and above | Torrential rain | causing a suffocating sense of pressure and fear | There is a high risk of large-scale disasters caused by the rain, requiring extreme caution. |

**1 The beginning of the rain**



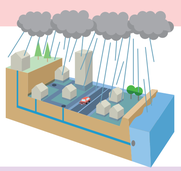

When rain falls, the volume of rainwater flowing into rivers, drainage channels, and storm drains gradually increases. Even if rainfall increases, urban areas will remain unaffected as long as rivers, roadside ditches, and storm drains do not become saturated.

**2 Rain intensifies, requiring caution**



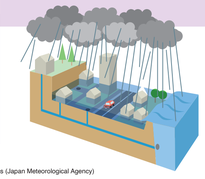
If heavy rain continues, the city's drainage capacity decreases, and rainwater begins to pool on roads. **River water levels also rise, requiring caution.**

**3 Inland Flooding Occurs** (Inland Flooding)



As the rain continues to fall heavily, drainage into rivers cannot keep up, causing water to overflow from manholes and waterways, resulting in flooding damage in low-lying areas. **Evacuate to higher ground or other safe locations.**

**4 Flood Damage Occurs** (Flooding)



If heavy rain persists continuously, it causes flooding from overflowing storm drains (Inland flooding) and also leads to major flooding damage (flood damage) such as rivers overflowing their banks or levees breaching. **Evacuate promptly to a safe location in response to evacuation advisories.**

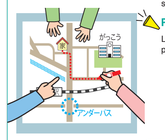
Source : Created with reference to rainfall intensity and precipitation patterns (Japan Meteorological Agency)

## Preparing Yourself on a Daily Basis

### Think about disaster prevention and evacuation on a daily basis

#### Evacuation Routes

**Evacuation Routes**
Set evacuation routes avoiding flooded areas.




**Where is the nearest evacuation shelter?**
Next, check the evacuation shelters near your home.

**Participating in disaster drills**
Let's all family members participate in disaster drills.

**Walk the evacuation route**
Walk the actual evacuation route to confirm its safety.

#### Self-Protection Measures

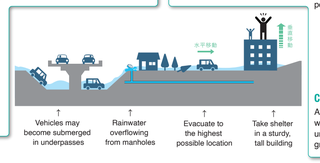
**Move your car to higher ground**
Evacuate to higher ground as early as possible.

**Evacuate to a safe location!**
Evacuate to higher ground at an early stage according to the danger level.

**Install sandbags and water barriers**
Reduce flood damage by installing sandbags and water barriers.

**Move household goods to higher ground**
Move valuables to the second floor or a safe location to prepare for potential flooding inside the house.

**Check for dangerous locations**
Avoid low-lying areas prone to water accumulation and underpasses; evacuate to higher ground whenever possible.




↑ Vehicles may become submerged in underpasses
↑ Rainwater overflowing from manholes
↑ Evacuate to the highest possible location
↑ Take shelter in a sturdy, tall building

### 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)

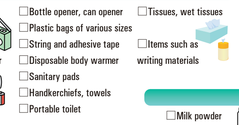
- ☐ Underwear
- ☐ Socks
- ☐ Mittens, gloves
- ☐ Sweater, rainwear
- ☐ Cap
- ☐ Helmet
- ☐ Items such as lap blanket

#### Medical supplies

- ☐ Household medicines
- ☐ Health-care record book
- ☐ Disinfectant
- ☐ 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
- ☐ Bottle opener, can opener
- ☐ Plastic bags of various sizes
- ☐ String and adhesive tape
- ☐ Disposable body warmer
- ☐ Sanitary pads
- ☐ Handkerchiefs, towels
- ☐ Portable toilet
- ☐ Tissues, wet tissues
- ☐ Items such as writing materials



#### 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

### Column ~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 |

## Preparing Yourself on a Daily Basis

### 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
①Confirm the evacuation timing from the evacuation and weather information
②List the actions to be taken before evacuation begins
③List the precautions to be taken during evacuation

**In normal weather**

**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

**Place to evacuate** *Check if it is suitable in case of floods
Place to evacuate ＿＿＿

**Means of transportation to evacuation site**
＿＿＿ minutes on foot ＿＿＿ minutes by car

**People who can assist you in evacuating**
①Name ＿＿＿ Telephone Number ＿＿＿
②Name ＿＿＿ Telephone Number ＿＿＿

**Before rain and wind intensify / When starting evacuation / When you should secure your safety**

| Estimated time of typhoon approach | Alert Level | Echizen City Information | (Reference) Information from authorities such as the Japan Meteorological Agency |
|---|---|---|---|
| 3 days before | Alert Level 1 | Typhoon information; Typhoon-related weather information | Large-scale typhoons and other disasters that are expected to cause river flooding. |
| 2 days before | Alert Level 2 | Heavy rain advisory; Flood advisory; Flood advisory information | |
| 1 day before | | | |
| 12 hours before | Alert Level 3 — Evacuation of elderly people and others | Heavy rain warning; Flood warning; Flood alert information | |
| 6 hours before | Alert Level 4 — Evacuation order | Flood risk information; Landslide alert information | |
| | Alert Level 5 — Ensuring Safety During an Emergency | Heavy rain emergency warning; Flood occurrence 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.

**Complete these self-protection measures by this point!**

**Discuss with your family the precautions you should take when evacuating.**
(Example) ・If there are imminent heavy rains at night, evacuate to a shelter.

**Complete evacuation by this time!**

**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!!
If 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 |
|---|---|
| Echizen City website | Emergency and disaster information |
| Yahoo! Disaster Prevention App | ・Evacuation Alerts (Push Notifications) ・Other Disaster Response Information |
| Fukui local meteorological observatory | Weather maps,current forecasts and weather alerts |
| Comprehensive information on rivers and erosion control in Fukui Prefecture | Weather alerts, information from river surveillance cameras, landslide risk information and so on. |
| Fukui Prefecture emergency net | Public transportation, utilities, disaster prevention and evacuation information for the area around your current location |
| Echizen City Official LINE | ・Evacuation Alerts (Push Notifications) ・Other Disaster Response 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.

1 7 1 — Dial 171

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 ➡ (OOOO)□□□－□□□□ ➡ 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 ➡ (OOOO)□□□－□□□□ ➡ 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 zones of reservoirs are listed for each town.


Issued by: Disaster Prevention and Crisis Management Division, General Affairs Department, Echizen City
1-13-7 Fuchu, Echizen, Fukui TEL: 0778-22-3081


## Understanding Evacuation

### 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 |
| Evacuation Information | | | Evacuation of elderly people and others | Evacuation order | 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 | 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! |
| 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) |
| Surrounding Circumstances Estimation of Disaster Occurrence | | Puddles form all over the ground. | Roads become like rivers. | Whole area turns whitish due to splashes of water. / Large-scale disaster will probably occur and extreme caution is required. | Heavy rains and storms are particularly unusual, and the risk of serious disaster is significantly high. |
| River flood Information | | Flood advisory information | Flood alert information | Flood risk information | Flood occurrence information |
| Real-time Heavy Rain and Flood Risk Map | | Warning | Alert | Very 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.

### Evacuation Information Published by Echizen City

In the event of a disaster, Echizen City administration will issue information such as evacuation details using loud speakers of government emergency radio (radio broadcast) and emergency sirens.

| Classification | Alert level | Siren |
|---|---|---|
| Evacuation of elderly people and others | Alert level 3 — Elderly people who need time to evacuate should start evacuating immediately. | Three or more sirens blaring for approximately 40 seconds |
| Evacuation order | Alert level 4 — The circumstances are such that there is high probability of a disaster occurring. | Six or more sirens blaring for approximately 20 seconds |
| Ensuring safety during an emergency | Alert level 5 — The disaster has already occurred, take the best course of action to save your life. | 12 or more sirens blaring for approximately 10 seconds |

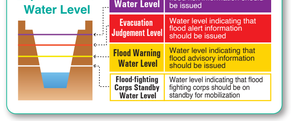
If you cannot hear the broadcast, you can call the following exclusive numbers to reconfirm the details.
☎0778-21-0088

### 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) |
|---|---|---|---|---|
| Yoshinose 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 |
| Asozu River | Kita | 2.30 | 2.50 | 2.80 |
| Hino River | Nakahirabuki | 3.50 | 4.00 | 4.40 |

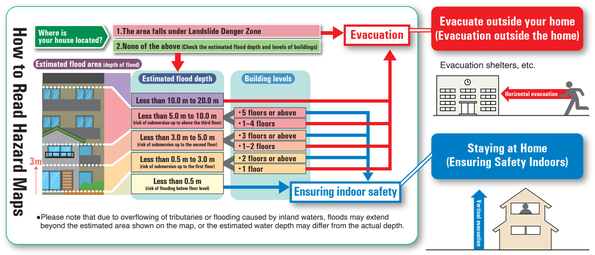
**Explanation of Water Level**




## Understanding Evacuation

### What is evacuation action?

Evacuation actions include "evacuation outside the home" to move to a safe location outside your residence, and "ensuring safety indoors" by moving to a safer location within your home, such as the second floor. The appropriate evacuation method varies depending on the area and situation. Particularly during heavy rain or nighttime evacuations, there is a risk of encountering hazards while moving outside your home. Therefore, choose the most appropriate method based on the timing of your evacuation.
Also, please choose either evacuation outside the home or securing safety indoors, taking infection prevention measures into consideration.




### 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.