

FUEFUKI CITY

Flood & Sediment Disaster HAZARD MAP

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Fuefuki City Hazard Map

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This hazard map constitutes an updated version of the Fuefuki City Hazard Map prepared by the Fuefuki Municipal Government in March 2011. This version incorporates assumed flooding results obtained by the national and prefectural government and the latest associated knowledge based on the large-scale flood damage that has arisen across Japan in recent years.

For inquiries on the Fuefuki City Hazard Map, contact: Fuefuki Municipal Government, General Affairs Dept., Disaster Prevention and Crisis Management Div. TEL: 055-262-4111

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Regarding This Hazard Map

For the purpose of explaining to and educating people on the status of flooding during a flood in an easy-to-understand manner, the Fuefuki Municipal Government prepares hazard maps based on the "Assumed Flooding Areas Based on the Premise of Maximum Assumed Rainfall" publicly released by the national government and the Yamanashi Prefectural Government in 2017. This hazard map shows assumed flooding points, areas with a risk of sediment disasters, evacuation sites and other locations in situations where rivers in Fuefuki City rise and overflow due to considerable rainfall. Using this hazard map as a reference, please recognize the disaster situation assumed to occur in the location of your home, school, work and so forth, and verify where evacuation routes, sites and other such locations are. Additionally, please cooperate in efforts to prevent and reduce disasters at your home, school office and other locations in your community.

Regarding Self-Help, Shared Help and Public Help

Self-help

Shared help

Public help

Have you heard of the trio of terms "self-help," "shared help" and "public help?" In order to keep damage from a disaster to a minimum, it is important that these three forms of help link together to elevate the ability to respond to that disaster.

Protecting yourself by yourself

"Self-help" refers to preparing and taking action for the sake of protecting yourself by yourself. Please outfit yourself with knowledge on disasters using the Fuefuki City Hazard Map and other sources, develop a proper understanding of disasters, think about what you need to prepare in advance, and safeguard yourself against disasters.

Protecting your community with the members of that community

"Shared help" refers to the act of working together with nearby residents in order to prepare and take action for the safe of protecting the community. When a disaster occurs, it is necessary to work together as a community in order to minimize damage and aid any victims. In the direct aftermath of an earthquake, when time is of the essence, the only people who can provide that aid are those around you. To ensure smooth cooperation in the time of a disaster, it is essential to regularly take part in local disaster prevention drills and otherwise ready a network that makes it possible to work together and respond when a disaster occurs. Please safeguard against disasters by forming voluntary disaster prevention organizations as well as an understanding of the properties of the local area to ready yourself and your community for the critical moment.

Public help

"Public help" refers to disaster countermeasures by the municipal government, the police, the fire department, the prefectural government, national government agencies, lifeline and other public agencies, and other such institutions. All of these agencies are prepared to engage in emergency response activities as soon as a disaster occurs.

Linkage among self-help, shared help and public help

In terms of your own well-being, you are the one who must protect yourself in the aftermath of a disaster. When the situation at hand is not one that you can respond to on your own, shared help is what you can depend on. At the same time, you have to be mindful to be a part of that shared help if it is within your power to do so. While there are limits to the assistance that public help can provide, the institutions behind it are capable of responding to large issues that cannot be resolved through self-help and shared help. The linkage among these three forms of help are needed in order to keep damage to yourself and the community to a minimum.

Maximum Assumed Rainfall

Until now, countermeasures for river flooding were steeped in rainwater, which serves as the basis for controlling river flooding. However, due to wind and flood damage in recent years, a new basis called "maximum assumed rainfall" was established based on the idea that "major flooding that levees and other facilities cannot fully prevent is bound to happen."

Assumed Flooding Area
Diagram indicating areas that will be inundated due to flooding and the depth of those areas from the ground at the time of flooding.
Inundation depth: Deep, Shallow

Continuous Flooding Time
Time that flooding continues from the time water starts overflowing. To the time a flood depth of 50cm or lower is reached.
Water depth: 0.5m

Overflow and Bank Erosion
Overflow
Areas with a risk of houses collapsing, etc. due to river levees breaking or due to inundation.
Bank erosion
Areas with a risk of banks being eroded and land flowing outwards due to the flow of rivers.
Collapse of houses

Evacuation According to Maximum Assumed Rainfall

- During a flood or sediment disaster, evacuation is generally conducted by "taking refuge" in a location without the risk of that disaster.
- If you reside in an area where flooding is assumed to occur or an area with the risk of a sediment disaster, please evacuate to an evacuation site, etc. designated by Fuefuki City where there is no risk of that disaster.
- If you are living or staying at a residence in an area where flooding is assumed to occur, lifeline functions such as water and sewer services, power and gas may be shut off when flooding continues for a prolonged time. There is a risk that you will be left behind.
- However, should the roads be submerged and/or the rain be coming down hard and you conclude that your life would be in danger if you change locations, please secure your safety in a safe location nearby (a strong, high building or high-altitude location) or an indoor location.
- With past disasters, there are people who lost their lives due to being caught in the disaster in the middle of evacuating.
- Upon a disaster, you must take action to evacuate based on your own judgment. Having a grasp in advance of the kind of disaster risk present in the region or home where you reside will help you take the correct action when evacuating.

Safe location nearby
If you have determined based on weather conditions, such as heavy rain and strong winds, that you may be at greater risk by changing locations, evacuating to a "safe location nearby" is another option available to you.

Securing your safety indoors
The minimum action one can take to protect their life upon an evacuation is to stay inside the building where they currently are but relocate to a safer room, the roof, or other location in order to secure their safety. However, depending on the disaster at hand, there are cases where doing so will not guarantee your safety unless certain conditions (strength, height, etc. of the building) are met.

Verifying Actions to Take When Evacuating

Use the hazard map to check the situation at your home.

● Your house is located in an "assumed flooding area."
If you answered "Yes," check the "Flood depth" and "Continuous flooding time." ☐ Yes ☐ No

Flood depth: m Continuous flooding time: hours

● My house is located in an "area with a risk of bank erosion." ☐ Yes ☐ No
● My house is located in an "area with a risk of overflow." ☐ Yes ☐ No
● My house is located in an "area with a risk of sediment disaster." ☐ Yes ☐ No

If you answered "Yes" to any of these, verify evacuation sites in the local area without a risk of flooding or sediment disaster as well as the evaluation routes to those sites, and be sure to take refuge there early on.

● Information when evacuating

Evacuation site: Time to relocate to evacuation site: min.

Precautions When Taking Refuge

When evacuating, make sure to call out each other in the neighborhood and nearby area and evacuate in groups as much as possible. Avoid dangerous spots and walk along safe roads, even if it takes more time.

Evacuate together while helping each other out
When evacuating, call out to elderly individuals and people with disabilities in the neighborhood and nearby area, and cooperate with each other as you evacuate.

Wear clothing that gives you ease of movement and evacuate in groups
Wearing rainboots and sandals is dangerous. When evacuating, make sure to wear sneakers and carry your belongings in a knapsack to keep both of your hands free.

Have an emergency bag ready
The things people need when a disaster occurs differ from person to person. Ready the things that you need in advance.

Do not approach locations where water is flowing
Even gently-flowing water is dangerous when it reaches knee-height. Refrain from approaching small rivers or other locations where water is flowing.

Be careful in flooded areas
In areas that have been flooded, there is a risk of falling into a ditch or otherwise losing your footing, which is very dangerous. Proceed forward while holding hands and using a long stick or something similar to keep track of your footing.

Avoid passing through areas nearby slopes
Avoid passing through areas nearby slopes. Slopes can collapse and fall at any given moment. Make sure not to approach them.

Take actions to evacuate early on!

When the water becomes too deep, it becomes difficult to move. If you feel like you might be in danger based on the weather, river water level or other information, evacuate right away.

Water depth that makes it difficult to walk
Adult male: 70cm
Adult female: 50cm
Children and the elderly: 20cm

Water depth that makes it hard to open doors
Adult male: 40cm
Adult female: 35cm
Children and the elderly: 30cm

Water depth that makes cars stuck
With some cars, the engine might stop when water reaches about halfway up the tires.
60cm

Information on Evacuation

In cases where a disaster occurs or there is a risk of a disaster occurring, the Fuefuki Municipal Government will announce evacuation information. It is important that you fully understand the content of each of the below and that you take proper action to evacuate when a disaster does occur.

Commencement of evacuation preparations and evacuation of elderly individuals, etc.

- This announcement is a signal to elderly and disabled individuals and persons assisting them to commence evacuation.
- Persons who will take time to evacuate should start doing so at this time.
- Make preparations so that you can evacuate at any time.
- If you feel like you are in danger, start evacuating.

Evacuation advisory

- This announcement is a signal to all persons in the applicable area to commence evacuation.
- Begin evacuating.
- Persons in underground spaces are advised to quickly evacuate to a safe place.

Evacuation order (emergency)

- When this order is announced, a disaster may already be taking place.
- If you have yet to evacuate, do so immediately.
- If it is dangerous for you to evacuate, take action to protect yourself at home.

Obtaining Information on Disaster Prevention

The Fuefuki Municipal Government, the Yamanashi Prefectural Government and the national government all release a variety of information on disaster prevention. Please safeguard against the occurrence of a disaster by taking advantage of these convenient tools that allow you to gather necessary information.

Fuefuki City Official Website <http://www.city.fuefuki.yamanashi.jp/>
Fuefuki City Disaster Prevention Administration Wireless Email
This email supplements disaster prevention administration wireless broadcasts by providing a means to get information to persons who live in regions where it is difficult to hear those broadcasts, handicapped individuals, people who are outside the city, and so forth. Note that there are cases when the email cannot be delivered due to circumstances.
Disaster Prevention Administration Wireless Listening Service
This service enables you to verify the content of the most recent Disaster Prevention Administration Wireless Broadcasts over the phone.
Dialing **0120-218-611** allows you to successively listen to up to three Disaster Prevention Administration Wireless Broadcast recordings, starting with the most recent one.

Yamanashi Prefecture Disaster Information Email Delivery System
"Weather warnings and advisories" such as those concerning heavy rain, "sediment disaster warning information" and "earthquake information" are sent via mobile phone email.
Register by following the below procedures.

- Send a blank email with no text to the email address for registration at: entry@sabo-mail.pref.yamanashi.jp
- Access the URL in the reply email sent to you.
- Select the information and region that you want to see. See the below URL for more details.
<https://www.pref.yamanashi.jp/mobile/kouchu/chumoku/dosya-mail.html>

- Yamanashi Prefecture Sediment Disaster Warning Information <http://www3.pref.yamanashi.jp/dosya/>
- Yamanashi Prefecture Rainfall and Water Level Information <http://www3.pref.yamanashi.jp/sub/uryou/uryou001.asp>
- Japan Meteorological Agency (JMA) <http://www.jma.go.jp/>
- MLIT Disaster Information for Rivers <https://www.river.go.jp/>
- MLIT Disaster Prevention Information Provision Center <http://www.mlit.go.jp/saigai/bosaijoho/>
- Kofu Office of Rivers and National Highways Website <http://www.ktr.mlit.go.jp/koufu/>

● In addition to the above, please also gather information from TV, the radio and other sources.

Useful Information in Making Judgments on Evacuating

The Japan Meteorological Agency (JMA) makes announcements of weather warnings, advisories and other information on disaster prevention and the weather in order to mitigate the damage that disasters cause. To assist residents with making judgments on action to take for evacuation, in cases where intense occurrences that tie into disasters are predicted, JMA makes announcements of advisories, warnings and special warnings in accordance with the increase in danger levels.

Weather information provided by JMA

Heavy rain advisories Flood advisories
Situations where a disaster may occur due to heavy rain or flooding

Heavy rain warnings Flood warnings
Situations where a major disaster may occur due to heavy rain or flooding

Sediment disaster warning information
Jointly announced by prefectural governments and JMA when the danger level of a sediment disaster occurring due to heavy rain intensifies

Special warnings
Situations where the danger of a major disaster has intensified significantly

Danger of a disaster **High**

Danger level distribution by JMA

Rain that has fallen seeps in to the ground or flows across its surface to collect at rivers. When rains are heavy, the water seeps into the ground to cause sediment disasters or collects on its surface to create inundation damage, and collects at rivers to cause them to rise and give way to flood damage. JMA has begun providing "danger level distributions" by converting such behavior of rainwater into illustration form; calculating that behavior as soil rainwater, surface rainwater and basin rainwater indices; and showing the intensification of disaster risk for each of those indices in the form of sediment disasters, inundation damage and flood damage.

Danger level distribution for heavy rain and flood warnings (summary)

Soil rainwater index
Amount of rain that seeped into and collected in the soil
Risk of soil disaster
Data in mesh form for determining sediment disaster warning

Surface rainwater index
Amount of rain that collected on the surface of the ground without seeping into it
Risk of inundation damage
Distribution of danger levels for heavy rain warnings (inundation damage)

Basin rainwater index
Amount of rain that collects from upstream areas and flows down to rivers
Risk of flood damage
Distribution of danger levels for flood warnings

How to Ensure Smooth Evacuation

Wind and flood damage from the likes of typhoons and sediment disasters that follow that damage can be projected before they happen. Check the information and actions that you require in order to protect your life from a disaster in advance.

Typhoon arises
It looks like a pretty big typhoon. With our house being near the river, I'm worried.
Let's ready ourselves for the typhoon by checking what we have to do in advance.
At this rate, the typhoon is headed right for us. We also need to consider evacuating to an evacuation site.
A "Commencement of evacuation preparations and evacuation of elderly individuals, etc." was just announced. The rain is still not that heavy yet, plus we have Grandpa to look after. Let's start evacuating while we still can.
It's a good thing that we managed to evacuate. It sounds like the river overflowed and sediment disasters occurred in the city.

Key points when taking action

- Check the weather forecast on TV, the radio, etc.
- Collect weather information on the Internet
- Use the hazard map to check disaster risk for your home and other locations as well as evacuation sites and routes
- Prepare disaster prevention goods and other things that your family needs (go shop for them if you do not have enough)
- Confirm the future plans of all family members (also consider canceling any plans that involve heading out far)
- Prepare emergency bag
- Place sandbags in locations in your house that might experience flooding
- Clean the ditches around your house
- Clean up anything around the house that the wind might blow away
- Bring any household belongings on the first floor to the second floor if there is a risk of the first floor being flooded
- Charge your mobile phone
- Prepare to evacuate if you are in a sediment disaster (landslide/avalanche/debris flow) warning area or assumed flooding area
- Check information on river water levels, sediment disaster warnings and other weather information on TV or the Internet
- Check evacuation information from the Fuefuki Municipal Government
- Begin evacuation to evacuation sites, etc. opened by cities with no assumed flooding or sediment disasters
- Relocate to a safe location inside the building if you are unable to evacuate due to heavy rain or flooding
- Continue gathering information from the radio or your mobile phone after arriving at the evacuation site

Direct typhoon hit

Assumed Continued Flooding Times in Fuefuki City

This map indicates continued flooding times for the Fuefuki River when conditions of 632mm of total rainfall over a 48-hour period in the upstream area of the Fuji River are assumed. Please note that flooding not indicated in this map may occur depending on the nature of rainfall.

There are no continued flooding times for the areas of the map outside the graphic.