Toppy, Tondabayashi's mascot

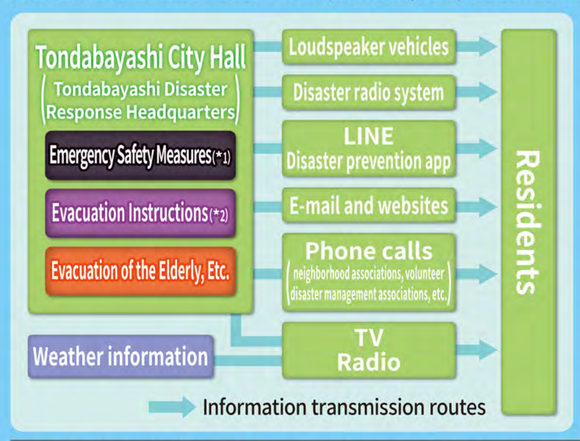
Store in a place for easy retrieval. **For home use**

Tondabayashi Flooding and Landslide Hazard Map

For protecting you and your precious family

Communication route for evacuation information and actions to take

Tondabayashi established a "Disaster Response Headquarters" to respond when a disaster may occur or is occurring. Additionally, as the threat of a disaster increases and evacuation is required, they will provide information on evacuation. Evaluate this information and take appropriate actions.



Alert Level	Evacuation information, etc. (issued by Tondabayashi)	Disaster mitigation and weather information (issued by JMA)	Conditions	Action to take
5	Emergency Safety Measures *1	Heavy rain emergency warning	Disaster occurring or imminent	Danger to life. Take immediate safety measures!
	Evacuate when or before Alert Level 4 is issued!			
4	Evacuation Instructions *2	Landslide alert information	High possibility of disaster	Total evacuation from dangerous areas
3	Evacuation of the Elderly, Etc.	Heavy rain warning Flood warning	Possibility of disaster	Evacuate the elderly, etc., from dangerous areas *3
2		Heavy rain, flood, and storm surge advisories	Worsening weather conditions	Check what evacuation actions to take
1		Early advisory information	Possibility of worsening weather conditions	Increase disaster preparedness

*1 Be aware that Alert Level 5 "Emergency Safety Measures" may not always be issued, as the occurrence of a disaster may not always be known.
*2 "Evacuation Instruction" will now be issued when "Evacuation Recommendation" was issued previously.
*3 In addition to the elderly, etc., those who feel at risk should also voluntarily evacuate.

Issued by: Tondabayashi Office of the Mayor Crisis Management Office 1-1 Tokiwa-cho, Tondabayashi, Osaka 584-8511 ☎ 0721-25-1000 (representative) Created in April 2022

Internet sources for disaster information

Use your computer or cellphone to check disaster information related to rainfall, river levels, etc.

- **Tondabayashi website** https://www.city.tondabayashi.lg.jp/
- **JMA Real-time Risk Map (map of risk levels)** https://www.jma.go.jp/bosai/risk
- **Osaka Disaster Prevention Net** https://www.osaka-bousai.net/pref/index.html
- **Osaka Regional Headquarters, JMA** https://www.jma-net.go.jp/osaka/

Notification services for disaster information

Emergency alert notifications (area notifications)

Services that provide emergency earthquake notifications or disaster/evacuation information from the government or local public agencies to all cellphones in a target area.
* For details, see the website for the respective cellphone company.

Tondabayashi Mail

A service that sends safety/security information and administrative information for Tondabayashi to cellphones and computers registered in advance.

Registration method: Send an empty email to the following address: →You will then be sent the registration address.
tonda@emp.ikkr.jp

Osaka disaster notifications (Osaka Disaster Prevention Net)

A service that sends region-specific (municipality) disaster information to cellphones registered in advance.

Registration method: Send an empty email to the following address: →You will then be sent the registration address.
touroku@osaka-bousai.net

▲Registration is free, but data fees may apply.

Emergency contact information

Institution name	Phone number
Tondabayashi City Hall (Disaster Response Headquarters)	0721-25-1000
•Voice-guided service for disaster information You can listen to announcements from the disaster radio system.	0800-805-5653
Tondabayashi Fire Department	0721-23-0119
•Hospital assistance line Introduces hospitals currently providing emergency care.	0721-23-9919
•Emergency Peace of Mind Center Osaka Provides consultations on emergency medical care.	#7119 or 06-6582-7119
Tondabayashi Police Department	0721-25-1234
Osaka Gas (dedicated number for gas leaks)	0120-319-424
Osaka Gas (Customer Center)	0120-394-817
Kansai Transmission and Distribution Inquiries related to power lines and poles	0800-777-3081
NTT (phone disruptions)	113 *

*Depending on your carrier, you may not be able to connect.

Getting disaster information from disaster prevention apps

Tondabayashi official LINE account	Tondabayashi disaster prevention app, Hazardon		NHK News / Disasters		Yahoo ! disaster prevention app	Weather news	Kansai Transmission and Distribution Kansai power outage information
	iPhone	Android	iPhone	Android			

*The apps are free to use, but users are responsible for transmission fees.
*Depending on the app, your region may need to be set. Set it to Tondabayashi.

Using the X hashtag during a disaster

The city uses the X hashtag to collect the information of the damage situation when the disaster (earthquake, heavy rain, typhoon, tornado etc.) occurs.
Disaster Response Headquarters would be highly appreciative if you can post the comments or pictures of the damage situation with the hashtag #Tondabayashi disaster#.
The post can be done by anyone.

For details➡ Tondabayashi Disaster X Search

Disaster message services

When large disasters occur, phone service may be disrupted for days from the start of the disaster. "Disaster Emergency Message Dial", "Disaster Message Board Service", and "Disaster Emergency Message Board (web171)" were established for these cases.

Disaster Emergency Message Dial

Dial 171 and follow the instructions

This is a phone service used during large-scale disasters as a voice message board (safety information).This allows people inside and outside of affected regions to record and play messages to and from each other. You can try the service out during the 1st and 15th of every month, the New Year 3-day holiday period, Disaster Preparedness Week, and Disaster Prevention and Volunteer Week.

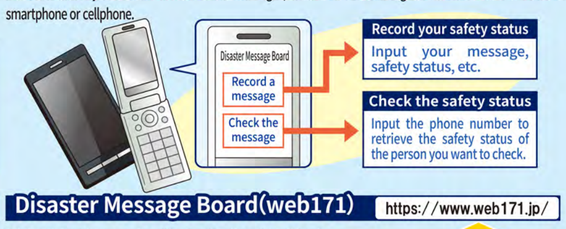
Recording messages	Playing messages
Dial 171	Dial 171
Press 1	Instructions will play Press 2

Whether you are inside or outside of an affected area,dial the phone number of the person in the affected area by starting with their area code.

Record / Play

Disaster Message Board Service

This allows disaster victims to use a smartphone or cellphone to record a message on their safety situation that can be checked by others. To record or check messages, select "Disaster Message Board" from the menu of the smartphone or cellphone.



Disaster Message Board(web171) https://www.web171.jp/

This is an internet message board for checking the safety of disaster victims. Information on the message board can be posted or viewed.

Access the above and use it according to the provided instructions.

Store supplies at home in preparation for a disaster.

Prepare for emergencies by storing at least 3 days worth of supplies, or 7 days worth, if possible.

Food

- ☐ Drinking water (about 3 L per person, per day)
- ☐ Emergency food (canned goods, crackers/biscuits, etc.)
- ☐ Powdered milk and baby bottles (if you have a baby)

Emergency/Safety measures

- ☐ Regular medications (stomach medication, cold medication, etc.)
- ☐ Bandages, gauze, adhesive bandages
- ☐ Ointments, disinfectants
- ☐ Medicine for chronic diseases
- ☐ Helmets ☐ Prescription Records
- ☐ Fire-proof emergency hoods

Clothes, etc.

- ☐ Clothes (heavy/light)
- ☐ Underwear
- ☐ Towels, blankets
- ☐ Gloves, work gloves
- ☐ Sleeping bags
- ☐ Rain gear

Valuables

- ☐ Cash (coins)
- ☐ Bank books, personal seals
- ☐ Credit cards
- ☐ Health insurance cards
- ☐ Licenses, etc. (personal identification)
- ☐ Credentials
- ☐ Mother and Child Handbook
- ☐ Family photos

Daily supplies, etc.

- ☐ Plastic bags
- ☐ Newspapers
- ☐ Candles, lighters
- ☐ Knife, can opener
- ☐ Tissues
- ☐ Flashlights
- ☐ Portable radio
- ☐ Extra batteries
- ☐ Portable toilet
- ☐ Pet goods
- ☐ Cell phones
- ☐ Writing utensils
- ☐ Toiletries
- ☐ Glasses
- ☐ Thermometer
- ☐ Paper diapers
- ☐ Masks
- ☐ Disinfectant
- ☐ Disposable body warmers
- ☐ Hazard Map

Evacuation tips

Keep emergency supplies prepared that are required for evacuation, and discuss the evacuation procedures.

Consider evacuating somewhere other than an evacuation site.

Based on the Flowchart for Determining Evacuation Actions on the page to the right, determine the need for evacuation and discuss in advance where to evacuate.

Consider evacuating with your pet(s).

Follow the rules of the evacuation shelter, take care to avoid interfering with others, and regularly keep extra pet supplies prepared.

Promptly evacuate according to the situation.

Even if no evacuation information is available, evacuate voluntarily based on the rain conditions, etc.

Help each other as a group.

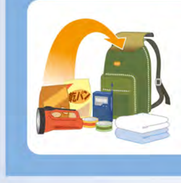
Avoid acting individually, and evacuate as a group with your neighbors to a pre-determined location.

Exercise caution when evacuating by car.

Cars can have difficulty traveling through water 30 cm deep or deeper. Exercise caution when evacuating by car.

Evacuate through a safe route.

Where possible, take a wide, safe route to the evacuation site while avoiding river banks, underground passages, etc.



Minimize the amount of goods you take.

Fit your emergency goods in a backpack so that both hands can be used freely.

Follow the instructions at the evacuation facility.

When you reach the evacuation facility, follow the instructions of the staff, and provide your name and address.

Individuals who need support to evacuate

These are individuals who have difficulty evacuating on their own during a disaster and require support. This generally includes the elderly, the disabled, etc. Cooperate with the community to confirm the safety of your elderly and disabled neighbors and help them relocate to evacuation facilities.

The elderly / sick

- ●Evacuate by carrying them to a safe location.
- ●Respond with multiple caregivers.

The physically disabled (wheelchair users)

- ●Navigating stairs requires the support of at least 2 persons. Face the wheelchair upwards when going both up and down.
- ●If there is only one caregiver, fashion a rope, etc., and carry the person to safety.

The visually impaired

- ●Provide verbal information.
- ●When guiding someone with visual impairments, do not grab the hand holding the cane. Let them hold your elbow, and walk slowly a half-step ahead.

The hearing impaired

- ●When speaking, move your lips clearly to aid understanding.
- ●Use sign language, writing, or gestures to convey accurate information.

The intellectually disabled

- ●Provide immediate protection if the person is alone when danger is imminent.
- ●Provide an easy-to-understand explanation using simple words, characters, pictures, or photos of the disaster situation and evacuation location, and guide them, if necessary.

The mentally disabled

- ●Explain the disaster situation and the evacuation location, and if necessary, provide reasonable guidance.
- ●If they are upset, take time to help them calm down.

For details, refer to the "Tondabayashi Support Plan for Individuals who Need Evacuation Support".

Horizontal and vertical evacuations

It is important to evacuate early in a disaster. However, if the evacuation route is already overflowed with water or danger is imminent, a dangerous evacuation should be avoided when possible. In this case, it is necessary to consider options other than an evacuation shelter (horizontal evacuation), such as moving to a high location like the top floor of a nearby building, or the second floor of your home (vertical evacuation) and waiting for help.

Dangerous evacuation

Go to evacuation shelter (horizontal evacuation)

Go to a high place (vertical evacuation)

Measures and preparedness against infection during evacuation

● When entering the evacuation shelter

- ・After being checked for a fever, etc., by evacuation shelter staff, enter the evacuation shelter in order according to staff instructions.
- ・Wear a mask in the evacuation shelter. If you do not have a mask, tell the staff during reception.

● Avoid the three Cs

- ・Evacuation shelters have limited space, and it can be difficult to avoid the three Cs. Consider evacuating at the home of a relative or friend.
- ・If staying in your car, be careful of economy class syndrome (leg circulation) and heat stroke.

The three Cs

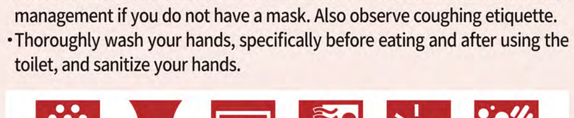
- **Closed spaces** :poor ventilation
  ▶Ventilate every 30 minutes.
- **Crowded places** :large gatherings
  ▶Maintain distance from other evacuees.
- **Close-contact settings** :conversing/speaking in close proximity
  ▶Minimize conversing and speaking in close proximity.

●Hygiene and health management

- ・If a toilet has a lid, close it before flushing.
- ・Periodically check your temperature.
- ・Tell the evacuation shelter management if you feel unwell.
- ・Prepare masks and disinfectant to take with you.

●Observe hand washing and coughing etiquette

- ・You must wear a mask in the evacuation shelter. Tell the evacuation shelter management if you do not have a mask. Also observe coughing etiquette.
- ・Thoroughly wash your hands, specifically before eating and after using the toilet, and sanitize your hands.



Advisories and warnings on heavy rain and flooding

Advisories, warnings, and emergency warnings will be issued by Osaka Regional Headquarters, JMA in the following cases.

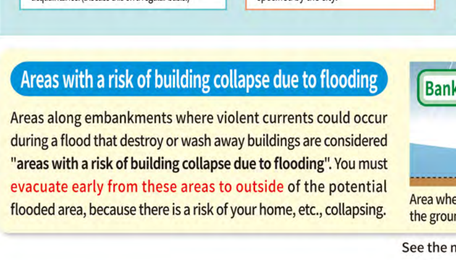
Heavy rain and flood advisories	Heavy rain and flood warnings	Heavy rain emergency warning
There is a possibility of disaster.	*There is a possibility of serious disaster.*	*Issued when the danger is much higher than with a warning*
Heavy rain: Issued when it is expected that inundation or landslides could occur due to heavy rain.	Heavy rain: Issued when it is expected that serious flooding or landslides could occur due to heavy rain.	Heavy rain: Issued when it is expected that rainfall from typhoons or localized downpours could occur at a level seen only once every several decades.
Flood: Issued when it is expected that disaster could occur due to rising or overflowing rivers or due to damage or collapse of embankments from heavy or prolonged rain.	Flood: Issued when it is expected that serious disaster could occur due to rising or overflowing rivers, or due to damage or collapse of embankments from heavy or prolonged rain.	*Emergency warnings are not issued for floods, because flood forecasts are issued for Japan's 400 designated rivers.

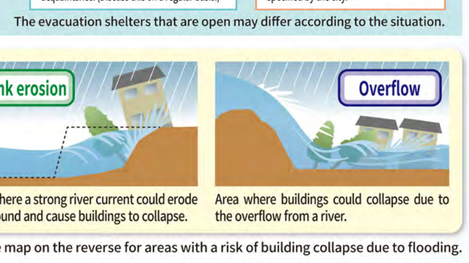
●Additionally, if extreme rain is observed on a scale that only occurs once every few years, the JMA will announce "record-breaking short-term rainfall". This means that conditions are occurring that could lead to disaster in regions for which this announcement is made.
●When heavy rain occurs, check the TV and radio for the latest advisories, warnings, and emergency warnings. In addition to TV and radio, you can check NTT telephone service 177 and the JMA website (http://www.jma.go.jp/).
*The rainfall criteria used for advisories and warnings in Tondabayashi can be checked from the JMA website.

River flooding and surface water flooding

*See the hazard map for river flooding.
*See the separate surface water hazard map for surface water floods.➡ Tondabayashi Surface water Search

Floods can be river floods, where a river embankment breaks or water flows over the embankment, or surface water floods, where rainfall cannot be sufficiently drained by channels or drainage systems. First understand the characteristics of floods so that you can confirm the route you can use to safely evacuate to an evacuation shelter.





Check the Flowchart for Determining Evacuation Actions

Check regularly

Check both the Flowchart for Determining Evacuation Actions and the Hazard Map to consider the disaster risk of your area and the conditions of your house to determine what actions to take and where best to evacuate.

Flowchart for Determining Evacuation Actions — What actions should you take for evacuation?

Check the Hazard Map* to find your house, and then mark it.

*The Hazard Map is colored to indicate areas where there is a high possibility of inundation or landslides. Disasters can occur outside of the colored areas as well.

Is the location of your house colored?
- No → Even if the area is not colored, if the ground above which you live is lower than the surrounding area or near a cliff, evacuate as necessary based on the evacuation information from the municipality.
- Yes ↓

There is a risk of disaster, and evacuation away from the home is generally required.

Exceptions
- ■Even if there is a risk of flooding, in the following cases, you can take safety measures inside (staying inside your own home).
  ▶You are outside of areas where there is a high possibility of buildings collapsing or falling due to flooding.
  ▶You are located above the flooding depth.
  ▶You have enough water and supplies to wait for the water to recede if flooding occurs.
- ■Even if there is a risk of landslides, if you live on a high floor in a sufficiently sturdy apartment building, you can be safe by staying at home.

Will it take time for you or the people you are with to evacuate?

Yes →
- Do you have relatives or acquaintances who live in a safe place where you can take shelter?
  - Yes → At Alert Level 3 (Evacuation of the elderly, etc.), evacuate to the safe house of a relative or acquaintance. (Discuss this on a regular basis.)
  - No → At Alert Level 3 (Evacuation of the Elderly, Etc.), evacuate to the evacuation shelter specified by the city.

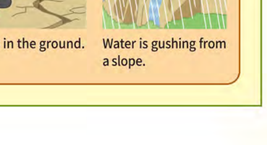
No →
- Do you have relatives or acquaintances who live in a safe place where you can take shelter?
  - Yes → At Alert Level 4 (Evacuation Instruction), evacuate to the safe house of a relative or acquaintance. (Discuss this on a regular basis.)
  - No → At Alert Level 4 (Evacuation Instruction), evacuate to the evacuation shelter specified by the city.

The evacuation shelters that are open may differ according to the situation.

Areas with a risk of building collapse due to flooding

Areas along embankments where violent currents could occur during a flood that destroy or wash away buildings are considered "**areas with a risk of building collapse due to flooding**". You must evacuate early from these areas to outside of the potential flooded area, because there is a risk of your home, etc., collapsing.

Area where a strong river current could erode the ground and cause buildings to collapse.



Area where buildings could collapse due to the overflow from a river.

See the map on the reverse for areas with a risk of building collapse due to flooding.

Rain intensity/type (Rainfall per hour)

Moderately heavy rain (10mm to less than 20mm)

The ground is fully covered in water, and it can be difficult to hear when talking. Prolonged rain requires alertness.

Heavy rain (20mm to less than 30mm)

A downpour. You can still get wet even with an umbrella. There is a risk of flooding from small rivers and of landslides.

Violent rain (30mm to less than 50mm)

Violent rain. Landslides and slope failures are likelier to occur. Roads may be restricted. Prepare for evacuation.

Very violent rain (50mm to less than 80mm)

Rain falls like a waterfall. The water splashes and appears white. The rain is intense enough to alert about 50% of people who are sleeping inside.

Torrential rain (80mm or more)

Exerts pressure making it feel difficult to breathe. High possibility of large-scale disaster due to rain. Must be on high alert.

*Refer to JMA materials

Types of landslides and their precursors

When heavy rain, typhoons, or earthquakes occur, the ground loosens, which could cause debris flows, slope failures, or landslides to occur. To protect yourself from landslides, it is important to first check for dangers around your home. Landslides have various precursors. If you observe any of these precursors, promptly evacuate and contact Tondabayashi.

Slope failures

Rainwater enters the ground and reduces the shear resistance of the soil, which causes the weakened, steep cliffs and slopes to suddenly collapse and fall. These can also be caused by earthquakes. They occur suddenly; collapse can occur and rocks can fall within a short period of time. A delayed escape increases the probability of death.

Debris flows

The soil in valleys and on slopes mixes with water from heavy rain and flows all at once. They have high destructive power, move quickly, and cause considerable damage. They are also called mountain tsunami.

Landslides

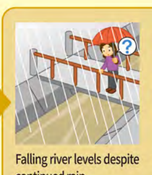
This is when a mountainside slowly moves due to rain water entering clay or other ground layers that are prone to sliding. They can also occur on relatively gentle slopes. Because a wide area moves at once, it causes extensive damage to homes, roads, and fields.

Look for these indicators!

Cracks in slopes.

An increase in the amount of spring water.

Cracks in cliffs. Small rocks falling from a cliff.


Falling river levels despite continued rain.

Sounds coming from the ground.

Muddy rivers or the inclusion of driftwood.

Muddy water coming from cliffs.

Cracks in the ground.

Water is gushing from a slope.

Landslide alerts

Landslide alerts are prepared and issued jointly by Osaka Prefecture and Osaka Regional Headquarters, JMA when there is an increased risk of landslides during a heavy rain warning.

Landslide alerts are important information for mayors when they issue evacuation information. When a landslide alert is issued, be highly alert for landslides, and determine whether you should evacuate. Even if a landslide alert has not been issued, it is still possible for a landslide to occur depending on the topography and geology. Therefore, be sufficiently aware of other disaster information and of landslide precursors; evacuate if needed.