


# Calculation Conditions for Rain and Tsunami Scenarios

Disaster	River	Scenario conditions	Released	Contact Information	Telephone number
River flooding	① Yodogawa River	24-hour total rainfall: 360 mm/hour  Probable maximum precipitation (Likelihood: about 1/1,000 years)	Jun. 2017	Yodogawa River Office, Kinki Regional Development Bureau, MLIT	072-843-2861
	Yamato River	12-hour total rainfall: 316 mm/hour  Probable maximum precipitation (Likelihood: about 1/1,000 years)	May 2016	Yamatogawa River Office, Kinki Regional Development Bureau, MLIT	072-971-1381
	② Higashiyoko and Nishiyoko Rivers	24-hour total rainfall: 904.1 mm/hour Maximum rainfall: 102.5 mm/hour  Probable maximum precipitation (Likelihood: 1 more than 1,000 years)	Nov. 2019	Tondabayashi Civil Engineering Office, Osaka Prefecture	0721-25-1131
	Ishikawa River	24-hour total rainfall: 724 mm/hour Maximum rainfall: 195.5 mm/hour  Probable maximum precipitation (Likelihood: 1 more than 1,000 years)	Jan. 2021		
	Kanzaki River	24-hour total rainfall: 737 mm/hour Maximum rainfall: 81.1 mm/hour  Probable maximum precipitation (Likelihood: 1 more than 1,000 years)	Jan. 2020	Nishi Osaka Flood Control Office, Osaka Prefecture	06-6541-7771
	Tenjiku River	24-hour total rainfall: 150 mm/hour Maximum rainfall: 142.6 mm/hour  Probable maximum precipitation (Likelihood: 1 more than 1,000 years)	Jan. 2020	Ikeda Civil Engineering Office, Osaka Prefecture	072-752-4111
	③ Taka River	24-hour total rainfall: 150 mm/hour Maximum rainfall: 145.4 mm/hour  Probable maximum precipitation (Likelihood: 1 more than 1,000 years)	Jan. 2020	Ikeda Civil Engineering Office, Osaka Prefecture Ibaraki Civil Engineering Office, Osaka Prefecture	072-752-4111 072-627-1121
	Ai River	24-hour total rainfall: 776 mm/hour Maximum rainfall: 189 mm/hour  Probable maximum precipitation (Likelihood: 1 more than 1,000 years)	Mar. 2020	Ibaraki Civil Engineering Office, Osaka Prefecture	072-627-1121
High tide	④ Neyagawa, Daini-Neyagawa, and Hirano Rivers, Hirayagawa-bunshiro Channel, Furukawa River	24-hour total rainfall: 683 mm/hour Maximum rainfall: 138.1 mm/hour  Probable maximum precipitation (Likelihood: 1 more than 1,000 years)	Mar. 2019	Neyagawa River Basin Flood Control Office, Osaka Prefecture	06-6962-7661
	⑤ High tide	Scenario in which the central pressure is 910 hPa (Muroto Typhoon level), radius of maximum cyclogenetic wind speed is 75 km (Isewan Typhoon level), traveling speed is 73 km/h, and the path is the same as that of Muroto Typhoon	Aug. 2020	Person in charge of emergency management, Port & Harbor Bureau, Osaka City	0725-21-7246
Inland flooding	⑥ Inland flooding	24-hour total rainfall: 549 mm/hour Maximum rainfall: 147 mm/hour  Probable maximum precipitation (Likelihood: about 1/1,000 years)	Mar. 2021	Coordination Section, Sewer Department, Public Works Bureau, Osaka City	06-6615-7594
	Tsunami	⑦ Tonankai and Nankai earthquake and tsunami	Scenario in which an earthquake with a magnitude of around 8.6 occurs, causing flooding due to a tsunami, and tide gates (those open at night), etc. did not close (high tide assumed)	Mar. 2004	Planning Section, Port & Harbor Bureau, Osaka City
⑧ Nankai Trough mega earthquake and tsunami		Scenario in which an earthquake with a magnitude of around 9.1 occurs, causing flooding due to a maximum class tsunami (breakwater and opening/closing of tidal barriers taken into account) (high tide assumed)	Aug. 2013	Disaster Prevention Planning Division, Office of Emergency Management, Osaka Prefecture	06-6944-6487

Creator of this pamphlet: Office of Emergency Management, Osaka City (Tel: 06-6208-7384)

This pamphlet is also available for view on the official website of the Office of Emergency Management, Osaka City.

<https://www.city.osaka.lg.jp/kikikanri/shitsu/>



Mar. 2021

## Transmission of information

### Receiving Information

**Bosai Information Mail** Creates the city's disaster measures information and information needed in times of disaster to your registered mobile phone or PC e-mail address

Must preregister

E-mail [toukou@osaka-bosai.net](mailto:toukou@osaka-bosai.net)

Send a blank e-mail to the e-mail address above to register. The e-mail address can also be read from the 2D code on the right.

Emergency Warning E-mail Emergency information will be sent to mobile phones that support emergency alert emails.

Check in advance to see if you can receive it

You may need to change your settings. Please ask your mobile phone provider for more information.

Yahoo! disaster prevention bulletin app It provides evacuation and earthquake information via push notifications.

When setting the region, enter XX Ward, Osaka City. Then you can receive information for the entire area of Osaka City.



### Finding Information

- If outdoor emergency speaker broadcasts could not be heard: call the Government Disaster Wireless Telephone Service (06-6210-3899), charges apply.
- In times of disaster, switch your TV to NHK and press the "d" button for data broadcasting to view evacuation advisories, if evacuation shelters are open, and other information.

Osaka Disaster Prevention Net

Evacuation information

URL <http://www.osaka-bosai.net/prelin/420.html>

Disaster Information for River (Ministry of Land, Infrastructure, Transport and Tourism)

River level information

URL <https://www.river.go.jp/>

River Disaster Management Information (River Office, Osaka Prefecture)

River level information

URL <http://www.osaka-kasen-portal.net/s>

Japan Meteorological Agency

Weather information, tsunami information, etc.

URL <https://www.jma.go.jp/>

Osaka City Rainfall Information

Weather information, etc.

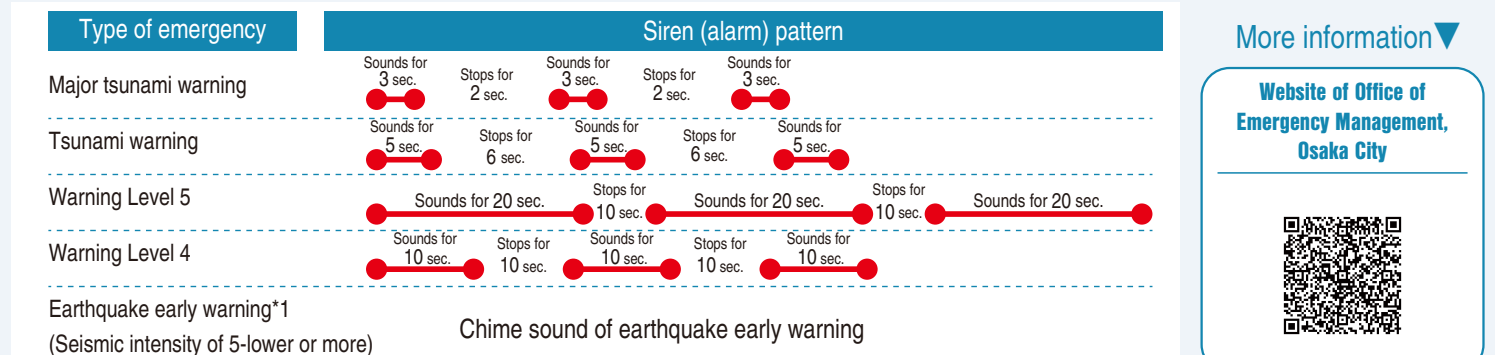
URL <http://www.ame.city.osaka.lg.jp/pw/0/>

Osaka Safe Travels

Weather information, etc.

URL <https://www.osakasafetravels.com/>

## Emergency Siren Patterns(Outdoor emergency speaker)



## Safety Confirmation Message Services

Disaster Emergency Message Dial 171 You can record or play messages in times of disaster.

Call 1-2-1

To leave message (recording method)

Press 1 Phone number of your home, yourself, or family member (in affected area)

To listen to message (confirmation method)

Press 2 Phone number of the person you want to contact (in affected area)

Dial from the area code

Dial from the area code

Disaster Emergency Message Board It can be accessed if internet connection is available in times of disaster.

Web171(NTT)

URL <https://www.web171.jp>

NTT docomo

URL <http://dengon.docomo.ne.jp>

SoftBank / Y!mobile

URL <http://dengon.softbank.ne.jp>

au(KDDI)

URL <http://dengon.ezweb.ne.jp>

J-anpi for one-stop searches of all safety status information

It enables the one-stop search of all safety status information posted on the disaster message boards of communication carriers.

URL <https://anpi.jp/>

<sup>1</sup> Disaster Emergency Message Boards become available when a major disaster occurs. For service details, please see the explanation provided by NTT and the respective mobile phone companies.

## What is My Timeline?

My Timeline provides an opportunity to prepare for wind and flood disasters, such as heavy rains and typhoons, and plan in advance how to escape using your own evacuation route while giving due consideration to the circumstances or evacuation behavior of each family member. Creating a schedule that summarizes who does what and when will help you act in an appropriate manner in the event of an emergency.

### Family Evacuation Plan

When heavy rain could cause river flooding

1 Evacuation place Determine where you will evacuate to and write it down. Determine all ① to ③ evacuation places that you will evacuate to depending on the situation.

In principle:

Place for early evacuation

- Home, relative's home, friend's home, workplace, etc. (the closest safe place that will not flood)
- Closest evacuation shelter (the closest safe place that will not flood)

Evacuation place ①

Evacuation place ②

Evacuation place ③

2 Plan what to do until you start evacuating.

Collect information

- Check weather and evacuation information

Prepare for evacuation

- Check emergency kit and stockpile
- Buy necessary items
- Begin moving household items to 2F, etc.
- Inspect area around the house
- Put away items that may blow away
- Check window locks
- Charge mobile phone
- Check opening of evacuation shelter

Contact and call out

- Call out to neighbors
  - To evacuate
  - To evacuate together
- Contact
- To evacuate
- To evacuate together
- Contact
- Communicate with family (If you're not together)
- Contact the person who will assist your evacuation (If you cannot evacuate by yourself)

Miscellaneous

3 Fill in when you will start evacuating and when you will do what.

Determine when you will take the actions you identified in 2.

Write down when you will evacuate.

Family Evacuation Plan

Heavy rain is forecasted

Warning Level 1 Early advisory information

Warning Level 2 Flood advisory Heavy rain advisory

Warning Level 3 Evacuation of the elderly from a dangerous area

Warning Level 4 Evacuation of all people from a dangerous area

Warning Level 5 Ensuring safety during an emergency

High

Fill in When will you evacuate? When will you do what?

Ex: Double check emergency grab-and-go bag (mom)

Ex: Double check evacuation shelter (everyone)

Ex: Grandma and mom evacuate to a relative's house by car

Likely evacuation place at this stage

Evacuation place ①, ②

Ex: Evacuate to XX Elementary School (dad and children)

Likely evacuation place at this stage

Evacuation place ①, ②

Likely evacuation place at this stage

Evacuation place ③

After evacuating

Contact method

After evacuating, inform your family and other important people that you have evacuated safely

Family meeting place

It is extremely dangerous to leave or relocate from your evacuation place before the evacuation information is lifted.

## When a record typhoon is approaching(High tide)

Disaster Information(Warning Level)

Typhoon forms

Warning Level 3

Warning Level 4

Warning Level 5

Disaster has occurred or urgent situation

Actions to Protect Yourself

Be on heightened alert, check evacuation actions, prepare for evacuation

For example:

- Stay alert of weather information
- Find an evacuation place on the hazard map
- Begin evacuating to places that will not flood
- To a relative's home, friend's home, workplace, etc., including those not in Osaka City
- Evacuate quickly to an evacuation site
- For example:
  - To a safer place that will not flood (incl. 3F or higher), e.g., a relative's home, friend's home, workplace
  - To your closest evacuation shelter
  - Double check your emergency grab-and-go bag in preparation for Warning Level 4 (evacuate everyone)
- If you feel you are in danger on your way to an evacuation site, go to the nearest safe place
- For example:
  - To your closest evacuation shelter
  - To your closest evacuation shelter (to a flood/tsunami evacuation building)
  - To a tall building or other elevated place
- It is very dangerous to evacuate in a flood. Your life is in danger. Immediately secure your safety!
- For example:
  - To your closest evacuation shelter
  - To your closest evacuation shelter (to a flood/tsunami evacuation building)
  - To a tall building or other elevated place

Evacuate early

Go to a place higher than flood level

Driving or evacuating in strong wind is dangerous

The strength of the wind affects evacuation. When strong wind gusts are blowing due to a typhoon, etc., a traveling truck may flip over, or block walls and houses may begin to collapse.

Higher than flood level

Evacuation Precautions

Move to an inundation-free place as soon as possible.

Upon feeling earthquake tremors or receiving a tsunami warning, evacuate to an inundation-free place as soon as possible.

- Outside the assumed flood inundation zone
- Safe, inundation-free floors of the nearest tsunami evacuation building
- Safe, inundation-free floors of the nearest tall building or on high places

Tsunami (higher than 1 m) caused by a massive Nankai Trough earthquake is expected to reach Osaka City within 110 minutes after the occurrence of the earthquake.

Tsunami Information

Estimated maximum tsunami height	Warning name	Your responses	
Quantitative expression (indication)	Qualitative expression		
Over 10 m	Huge	Major tsunami warning (Emergency warning)	
10 m 5m-Height≤10m			As quickly and high as possible
5 m 3m-Height≤5m			
3 m 1m-Height≤3m	High	Tsunami warning	If you did not escape in time, run and climb up a tall building or other elevated place
1 m 20cm≤Height≤1m	N/A	Tsunami advisory	Stay alert of tsunami information

## When a tsunami strikes

### How Will You Evacuate?

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## Sumiyoshi Ward Save

# Protect Yourself from Flooding and Tsunami!

大阪市 Osaka City Flood Hazard Map English

How to Use this Hazard Map

How to Use 1 Check the disaster risks for your neighborhood

Use this hazard map to check risks, including which river will cause flooding and whether you will be affected by high tide in times of heavy rain or typhoon, and whether your area is subject to tsunami damage following an earthquake.

How to Use 2 Determine when and where to evacuate to for each type of disaster

Your evacuation actions to protect yourself will be different depending on the situation of the disaster and the situation you are in. Determine when and where you will evacuate to for protecting yourself from each type of disaster: heavy rain; typhoon; and tsunami.

How to Use 3 Check your daily preparedness by making use of the information in here and My Timeline to protect yourself

A variety of information is released in times of disaster. Take daily preparedness measures by making use of the information in here which will facilitate immediate actions in an emergency, as well as My Timeline which you can fill out.

Evacuation and meeting place Determine and write down the evacuation and meeting places by type of disaster.

Heavy rain Flooding

Contact

Typhoon Flooding / High Tide

Evacuation and meeting place

Contact

Tsunami

Evacuation and meeting places

Contact

Emergency contact information

Sumiyoshi Ward Office	06-6694-9734	Road (Suminoe Construction and Maintenance Office)	06-6686-0434
Sumiyoshi Ward Public Health and Welfare Center	06-6694-9973	Electricity (common to all branches of Kansai Electric Power)	0800-777-8810
Police Station	110	(Kansai Electric Power (power outage))	0800-777-3081
Fire Department	119	Gas leak (Osaka Gas)	0120-0-19424
Sewer (Suminoe Sewer System Maintenance Center)	06-6686-1909	Telephone trouble (NTT)	113
Water Service (Southern Water Service Center)	06-6627-9511	When using a fiber optic telephone or mobile phone	0120-444113

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## When heavy rain could cause river flooding

Disaster Information(Warning Level)

Warning Level 1

Warning Level 2

Warning Level 3

Warning Level 4

Warning Level 5

Disaster has occurred or urgent situation

Actions to Protect Yourself

Be on heightened alert

For example:

- Stay alert of weather information

Check evacuation actions

For example:

- Double check evacuation route on the hazard map
- Stay alert of the rainfall situation in your area

Evacuate quickly to an evacuation site

For example:

- To a safer place that will not flood (incl. 3F or higher), e.g., a relative's home, friend's home, workplace
- To your closest evacuation shelter
- Double check your emergency grab-and-go bag in preparation for Warning Level 4 (evacuate everyone)

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<sup>1</sup> Depending on the situation of the river(s) and the disaster, information may not necessarily be released in this order. It is necessary to respond flexibly to the situation.

### How Will You Evacuate?

If you can stay at home due to shallow flooding, low risk of house collapse, etc.

Do not go outside if it is unwise

Depending on the wind and rain situation, it may be safer to stay at home. Evacuate to a safe place in your home that will not flood.

If you cannot stay at home due to deep flooding, high risk of house collapse, etc.

Evacuate early

Evacuate early to a place that is unlikely to flood. Your options may include evacuating to a relative's home, a friend's home, or workplace.

It is extremely dangerous to leave or relocate from your evacuation place before the evacuation information is lifted.

### About flood disaster evacuation buildings

Image

Osaka City is working to secure flood disaster evacuation buildings, which will serve as temporary or emergency facilities for protecting people's lives from river flooding and tsunami. Know where your closest flood disaster evacuation buildings are in case of an emergency.

すいがいじび 大阪府 水害時避難ビル

Flood Disaster Evacuation Bldg.

水災時避難ビル / 수해시 대피 빌딩

避難可能時間 「24時間」