# S

# Find out the risk level of your home

(How to interpret the flood hazard maps)

# There are three hazard maps for Sumida City

#### River floods

This map indicates the maximum predicted depth and duration of flooding around the Arakawa River in the event of the heaviest rainfall with breakages of all embankments that are at risk of breaking.

#### **2** Storm surges

Depth and duration of flooding for storm surges are those predicted to occur if a typhoon equivalent to the worst in history passes through the route that will cause the highest storm surge in Tokyo Bay. Cases in which a storm surge and river flooding both occur at once have also been taken into account.

#### Rainwater floods

This hazard map is a combination of the Koto Inner River Basin Flooding Area Forecast Map and the Sumidagawa River and Shingashigawa River Basin Flooding Area Forecast Map. River flooding is not expected in the inner river basin of the Koto area; this map indicates the depth of flooding that may be caused by blockage of drain pipes or water collecting on low ground.

Floodwaters could

be over 6m deep

in some areas!

# Depth of flooding

Depth of flooding indicates the depth of the floodwaters that will occur if the Arakawa River floods and/or there is heavy rainfall. When floodwaters reach a depth of around 20cm, it becomes difficult to walk or open doors. Experts say that at depths of around 30cm, cars cannot move, so it will be difficult to evacuate by car. Check the depth of flooding in your neighborhood.

Flooding could occur across a large area of Sumida City!
Evacuate outside the Koto area!

For river floods (1) and storm surges (2), check the depth of flooding for both types and prepare for the deeper of the two.

2 Storm surges

• River floods





Check the maps for the greater area

Be careful of underground spaces and underpasses!

Make sure you're aware of dangerous areas in your home and neighborhood.

3 Rainwater floods



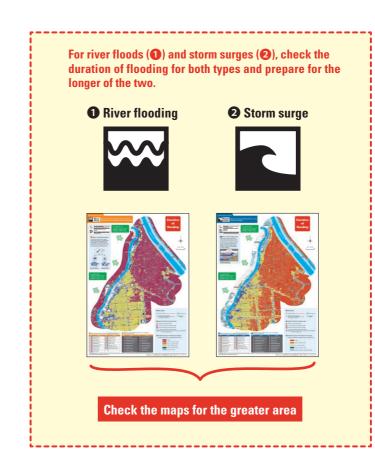


See p.14-17 for details



## Duration of flooding

For river floods (1) and storm surges (2), the duration of flooding is the time until the depth of the floodwaters falls below 0.5m. Different durations are predicted for river flooding and storm surges. In some areas, flooding is predicted to last for more than two weeks, and buildings in those areas may be without infrastructure such as electricity and gas for a long time. Check the duration of flooding that is predicted for your neighborhood in the case of 1 or 2.

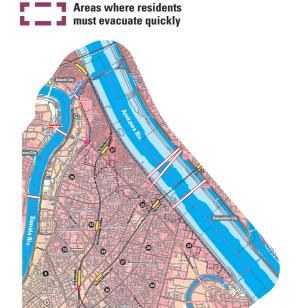


# Predicted duration of flooding (river flood) Duration of river flooding 0.5m+ deep 2 weeks + 1 week +, less than 2 weeks 3 days +, less than 1 week 1 day +, less than 3 days 12 hours +, less than 1 day Less than 12 hours



# Areas where residents must evacuate quickly

In some areas of Sumida City, there is a high risk of homes being destroyed or washed away by powerful floodwaters or bank erosion. If you live in one of those areas, you will need to evacuate quickly. The boundaries drawn for these areas are a guide only, and homes outside those areas could still be destroyed.



Map of predicted area of heavy rain

North

Koto Inner River Basin Flooding Area Forecast Map Created by Urban Flood Support Liaison Council (Koto Inner Basin)

March 26, 2020

Maximum predicted Maximum 153mm per hour, 690mm in total

Sumidagawa River and Shingashigawa River Basin Flooding Area Forecast Map Created by Urban Flood Support Liaison Council (Sumida River and Shingashi River Basin)

March 30, 2021 Creation date

Maximum predicted Maximum 153mm per hour, 690mm in total rainfall

#### Flood evacuation sites (rainwater floods)

8	Kototoi Elem. Sch.	22	Nakagawa Elem. Sch.	29	Daiyon-azuma Elem. Sch.	36	Umewaka Elem. Sch.
9	Sumida J. H. Sch.	23	Kinegawawaremoko	30	Hikifune Elem. Sch.	37	Sumida Elem. Sch.
10	Koume Elem. Sch.	24	Yahiro Area Plaza	31	Bunka J. H. Sch.	38	Sakuratsutsumi J. H. Sch.
18	Tachibana Azumanomori Elem. Sch.	25	Yahiro Elem. Sch.	32	Oshiage Elem. Sch.	39	Sumida City Athletics Ground
19	Tachibana Kindergarten, etc.	26	Azumadaini J. H. Sch.	33	Daiichiterajima Elem. Sch.		
20	Higashiazuma Elem. Sch.	27	Terajima J. H. Sch.	34	Daisanterajima Elem. Sch.		
21	Azumatachibana J. H. Sch.	28	Daisan-azuma Elem. Sch.	35	Dainiterajima Elem. Sch.		

<sup>\*</sup>See p.23 for details

Creation date

rainfall

#### Locations of sandbag stations

6	Azumanishi Park	0	Higashi-Sumida Park
7	Fujinoki Park	0	Sumida Children's Playground
8	Tsubaki Park	<b>D</b>	Hiraibashi Warehouse
9	Tachibana Park		

<sup>\*</sup>See p.34 for details



# Map legend Sumida City Office

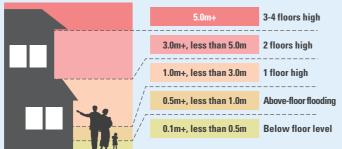
\*Not an evacuation site

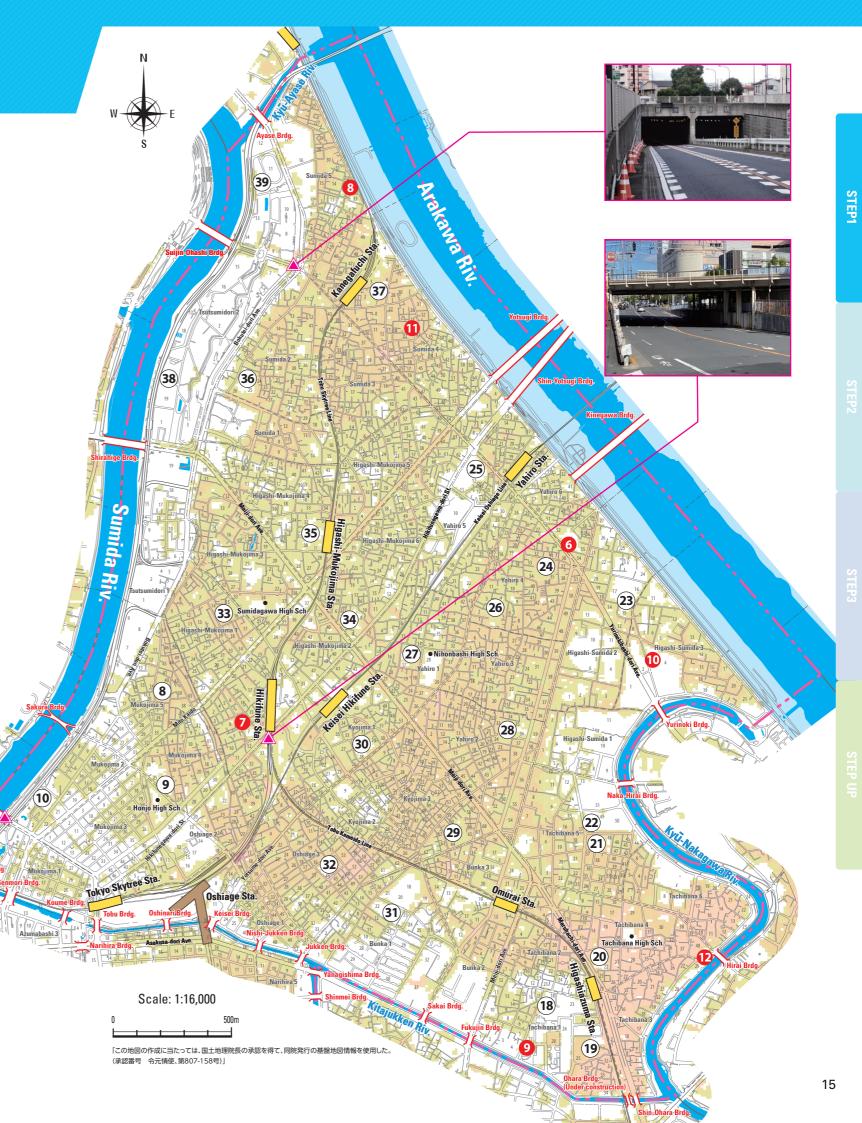


Dangerous area during flood (underpass (area where road, etc. is low due to grade separation))

Area of river, etc.

## Predicted flooding depth (rainwater floods)





rainfall

Map of predicted area of heavy rain

South

Koto Inner River Basin Flooding Area Forecast Map Created by Urban Flood Support Liaison Council (Koto Inner Basin) Creation date

March 26, 2020

Maximum predicted Maximum 153mm per hour, 690mm in total

Sumidagawa River and Shingashigawa River Basin Flooding Area Forecast Map Created by Urban Flood Support Liaison Council (Sumida River and Shingashi River Basin)

March 30, 2021 Creation date

Maximum predicted Maximum 153mm per hour, 690mm in total rainfall

#### **■ Flood evacuation sites (rainwater floods)**

1	Ryogoku Elem. Sch.	1	Honjo J. H. Sch.
2	Midori Elem. Sch.	12	Yokokawa Elem. Sch.
3	Chuwa Elem. Sch.	13	Sotode Elem. Sch.
4	Kikukawa Elem. Sch.	14	Ryogoku J. H. Sch.
5	Kinshi Elem. Sch.	15	Futaba Elem. Sch.
6	Yanagishima Elem. Sch.	16	Kinshi J. H. Sch.
7	Narihira Elem. Sch.	17	Tatekawa J. H. Sch.

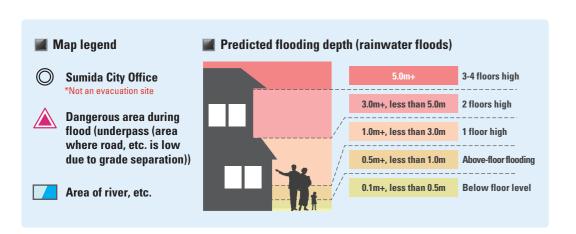
<sup>\*</sup>See p.23 for details

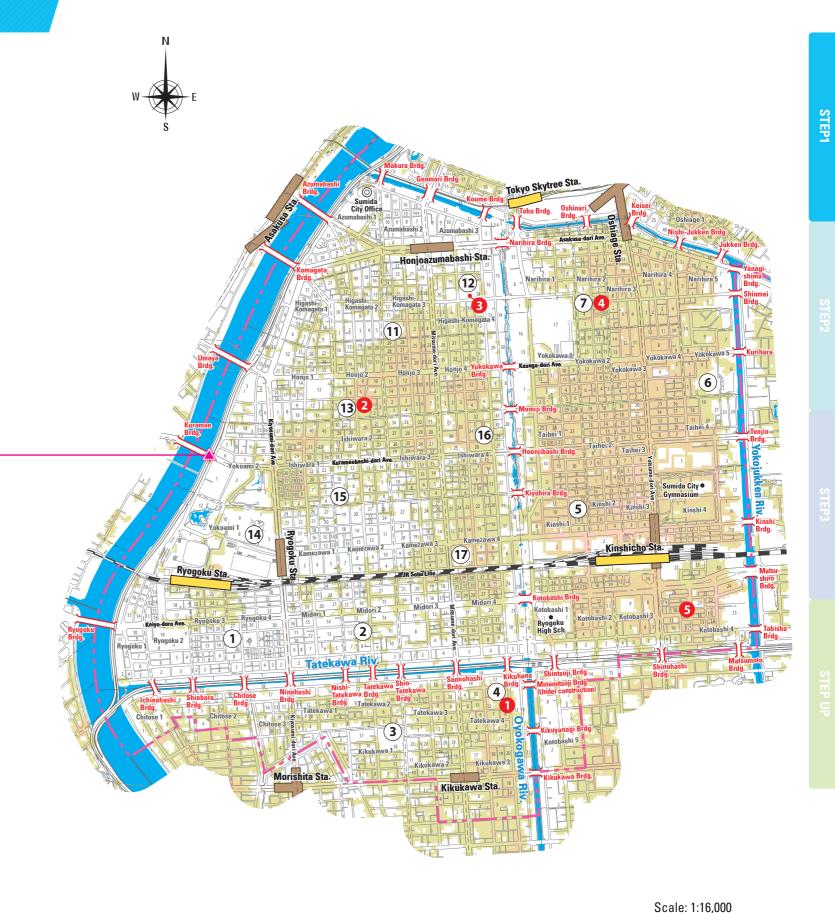
#### Locations of sandbag stations

0	Kikukawa Park	4	Narihira Park
2	Wakamiya Park	6	Kinshibori Park
8	Yokokawa Park		

<sup>\*</sup>See p.34 for details







「この地図の作成に当たっては、国土地理院長の承認を得て、同院発行の基盤地図情報を使用した。(承認番号 令元情使、第807-158号)」

Immediately evacuate to a safe

place outside the Koto area

? Is there a place you have personal access to in another area that is not at risk of flooding (a friend or family member's home, a hotel, your workplace, etc.)?

**Greater area evacuation order** 

Evacuate to a safe place you have personal access to

Go to a safe place outside the Koto area, such as:

A friend or family member's home

A hotel or your workplace

? Is there a room in your home that is higher than the predicted depth of the flooding? Can your home withstand severe wind and rain?

Do you have enough food, etc. to last for the duration of the flooding?

2 Shelter at home

Get to the highest place possible in your home and shelter there.

See p. **27** for details

? Is there a place you have personal access to in this area that is not at risk of flooding (a friend or family member's home, your workplace, etc.)?

3 Evacuate to a safe place you have personal access to in this area

Evacuate to a place in the Koto area that will not be flooded, such as:

A friend or family member's home

Your workplace

Evacuate to a river flood/storm surge evacuation site

All people in dangerous areas will be evacuated to a river flood/storm surge evacuation site.

Check the maps of the greater area for details

\*Elementary and junior high schools that are not designated as river floor/storm surge evacuation sites

If you are unable to evacuate

A local upward evacuation (emergency) order may be issued

This order is given if the Arakawa River has flooded or is likely to flood

Evacuate immediately to a high area of your home or to a high, sturdy building.

If there is a low risk of flooding from the Arakawa River but a risk of strong wind and/or heavy rain

The Sumida City government will announce evacuation information based on the alert level

und 0.5-1 days before Evacuation of elderly and vulnerable people (Alert Level 3)

Elderly and vulnerable people mus evacuate from dangerous areas

See p. 20-26 for details

? Is there a place you have personal access to in another area that is not at risk of flooding (a friend or family member's home, a hotel, your workplace, etc.)?

Go to a safe place

Yes

Yes

Able to leave

Unable to leave

Evacuate to a safe place you have personal access to

Go to a safe place outside the Koto area, such as:

A friend or family member's home

A hotel or your workplace

? Is there a room in your home that is higher than the predicted depth of the flooding?
Can your home withstand severe wind and rain?
Do you have enough food, etc. to last for the duration of the flooding?

Shelter at home

Get to the highest place possible in your home and shelter there.

See p. 27 for details

? Is there a place you have personal access to in this area that is not at risk of flooding (a friend or family member's home, your workplace, etc.)?

No No

Evacuate to a safe place you have personal access to in this area

Evacuate to a place in the Koto area that will not be flooded, such as:

A friend or family member's home

Your workplace

No

? Is there anyone in your household who needs extra time to evacuate (elderly people, people with disabilities, infants and their carers, etc.)?

Evacuate to a rainwater flood evacuation site

All evacuation sites in the area will be open

Evacuate to a high place nearby.

See p.14-17 and p. 23-26 for details

An evacuation order (Alert Level 4) may be issued\*

\*If an evacuation order (Alert Level 4) is issued and there is a high risk of flooding of the Arakawa River, people in evacuation sites in the northern area may be evacuated to an evacuation site in the southern area.

S Evacuate to a river flood/ storm surge evacuation site

the maps of the greater area for details

All people must evacuate from dangerous areas.

If you are unable to evacuate

An evacuation order
(Alert Level 5) may be issued
This order is given if the Arakawa River has flooded or is likely to flood.

Evacuate immediately to a high area of your home or to a high, sturdy building.

Rainwater floods (localized heavy rain, etc.)

If flooding occurs rapidly

Get to a high building nearby or the top floor of your home.

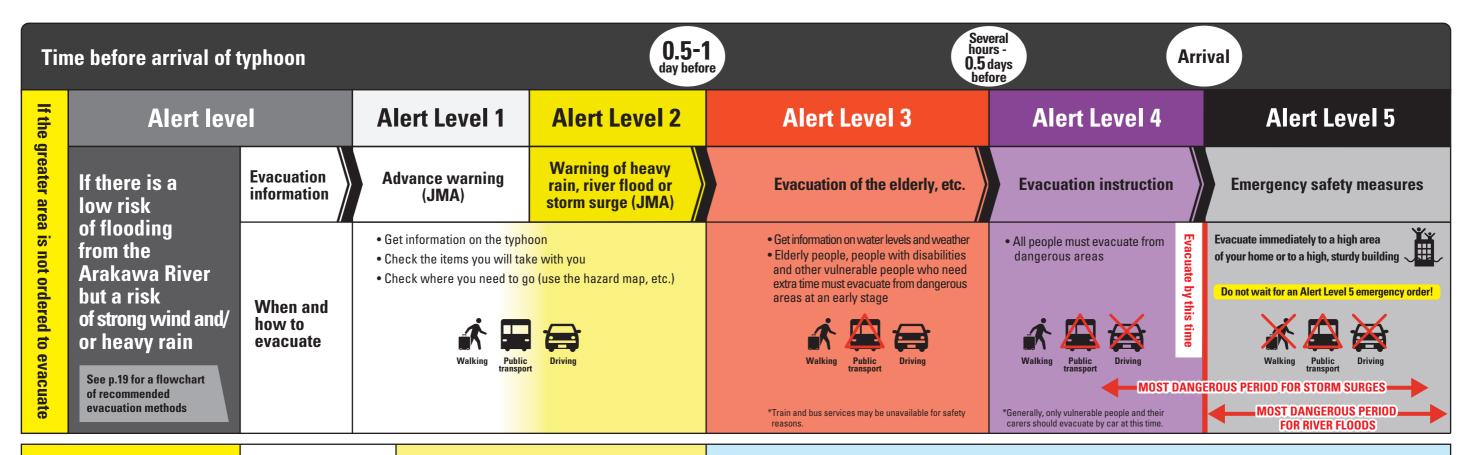


Refer to the evacuation information on this page when making your evacuation timeline (My Timeline).

See p. 28-31 for details

18

#### 3 days (72 hours) 1-3<sub>days</sub> 1 day Shortly Time before arrival of typhoon Arrival All 5 cities in t if the greater area is **Voluntary evacuation Evacuation Start considering Greater area Local upward evacuation (emergency)** information options (greater area) outside the greater area evacuation order If there is a risk of flooding Get information on the typhoon Evacuate to a safe place · Immediately evacuate to a If you cannot evacuate outside from the Stay vigilant after the typhoon ends outside the Koto area as soon safe place outside the Koto the greater area, evacuate • Make sure you can evacuate as possible area **Arakawa River** immediately to a high area immediately of your home or to a high, Even if the rain has stopped and/or the • Start evacuating vulnerable sturdy building typhoon has passed, there is still a risk of See p.18 for a flowchart people and those who need the Koto area -s ordered to evacuate When and river floods. Flooding can continue for of recommended extra time how to over 2 weeks in parts of the Koto area. evacuation methods evacuate ьy and bus services will stop when it for safety reasons. MOST DANGEROUS PERIOD FOR STORM SURGES = hecomes unsafe for them to operate \*Generally, only vulnerable people and their \*Evacuate as soon as possible as there **IOST DANGEROUS PERIOD** carers should evacuate by car at this time. **FOR RIVER FLOODS**



**Rainwater floods** 

Conditions when evacuating

Rainwater floods are caused by short, localized downpours. These happen suddenly, so make sure you're always prepared.

If heavy rain is expected, get to a high building nearby or the top floor of your home.

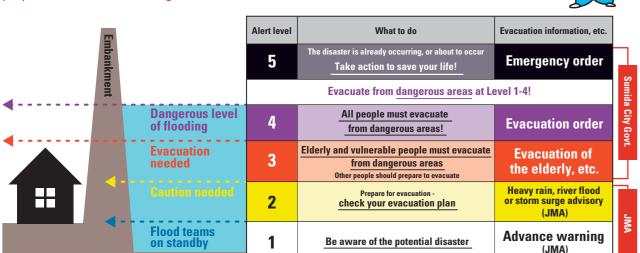
You need to evacuate

at Alert Level 1-4!

### Alert levels (5 levels) and evacuation information

In the event of a disaster, authorities such as the Sumida City government and Japan Meteorological Agency will use a five-level alert system to issue warnings and orders.

If an Alert Level 4 evacuation order is issued by the Sumida City government, all people must evacuate from dangerous areas.



#### Arakawa River flood forecasts

Arakawa River flood forecasts are issued jointly by the Japan Meteorological Agency and the Ministry of Land, Infrastructure, Transport and Tourism as Designated River Flood Forecasts\*1. There are four types of forecast depending on the water level of the river.

Corresponding alert level	Y IVNA I ITOPIA TOP ANNOUNCOMONT		Water level at reference point*2	Evacuation information for affected cities
Equivalent to	Flood Information (Flooding)	As soon as flooding occurs in a city subject to flood forecasts	-	Emergency order
Equivalent to	Flood Information (Danger) When flooding reaches a dangerous level at the reference point		Dangerous level of flooding 7.7m	Evacuation order
Equivalent to	Flood Information (Warning)	When flooding is expected to reach a dangerous level at the reference point, or when it has reached evacuation level and is expected to rise further.	Evacuation needed 6.5m	Evacuation of elderly and vulnerable people
Equivalent to	When flooding has reached a level requiring caution at the reference point and is expected to rise further.		Caution needed 4.1m	-

<sup>\*1</sup> See p.25 for details on Designated River Flood Forecasts.

## Where to go when your life is in danger

Flood Evacuation Site		Address	Designated Ev	acuation Sites	Accessible toilets	Elevator
		Auditos	River flood/storm surge Rainwater flood		Accessible tollers	Lievatoi
1	Ryogoku Elem. Sch.	Ryogoku 4-26-6	✓	✓		
2	Midori Elem. Sch.	Midori 2-12-12	✓	✓	✓	iii
3	Chuwa Elem. Sch.	Kikukawa 1-18-10	✓	✓		
4	Kikukawa Elem. Sch.	Tatekawa 4-12-15	✓	✓		
5	Kinshi Elem. Sch.	Kinshi 1-9-12	✓	✓	✓	
6	Yanagishima Elem. Sch.	Yokokawa 5-2-30	✓	✓		
7	Narihira Elem. Sch.	Narihira 2-4-8	✓	✓		
8	Kototoi Elem. Sch.	Mukojima 5-40-14	_	✓	✓	
9	Sumida Elem. Sch.	Mukojima 4-25-22	✓	✓	✓	ĤĤĤ
10	Koume Elem. Sch.	Mukojima 2-4-10	✓	✓	✓	
11	Honjo J. H. Sch.	Higashi-Komagata 3-1-10	✓	✓		
12	Yokokawa Elem. Sch.	Higashi-Komagata 4-18-4	1	1		
13	Sotode Elem. Sch.	Honjo 2-1-16	✓	✓		
14	Ryogoku J. H. Sch.	Yokoami 1-8-1	✓	✓	✓	ŔŔŔ
15	Futaba Elem. Sch.	Ishiwara 2-1-5	✓	✓	✓	
16	Kinshi J. H. Sch.	Ishiwara 4-33-14	✓	✓		
17	Tatekawa J. H. Sch.	Kamezawa 4-11-15	1	<b>√</b>		
18	Tachibana Azumanomori Elem. Sch.	Tachibana 1-18-6	-	✓	✓	iii
19	Tachibana Kindergarten, etc.	Tachibana 1-25-9, etc.	_	✓		
20	Higashiazuma Elem. Sch.	Tachibana 4-22-11	-	✓	✓	
21	Azumatachibana J. H. Sch.	Tachibana 5-48-2	_	✓	✓	iii
22	Nakagawa Elem. Sch.	Tachibana 5-49-4	-	✓	✓	
23	Kinegawawaremoko	Higashi-Sumida 2-15-2	_	✓	✓	iii
24	Yahiro Area Plaza	Yahiro 4-35-17	_	✓	✓	iii
25	Yahiro Elem. Sch.	Yahiro 5-12-15	_	✓		<del>i i i</del>
26	Azumadaini J. H. Sch.	Yahiro 4-4-4	_	✓	✓	<del>i i i</del>
27	Terajima J. H. Sch.	Yahiro 1-17-15	_	✓		
28	Daisan-azuma Elem. Sch.	Yahiro 2-36-3	-	✓	✓	
29	Daiyon-azuma Elem. Sch.	Kyojima 3-64-9	_	✓		
30	Hikifune Elem. Sch.	Kyojima 1-28-2	_	✓		
31	Bunka J. H. Sch.	Bunka 1-22-7	_	✓		ĤĤ
32	Oshiage Elem. Sch.	Oshiage 3-46-17	-	✓		Î
33	Daiichiterajima Elem. Sch.	Higashi-Mukojima 1-16-2	_	1		
34	Daisanterajima Elem. Sch.	Higashi-Mukojima 6-8-1	-	✓	✓	
35	Dainiterajima Elem. Sch.	Higashi-Mukojima 4-30-2	-	✓		
36	Umewaka Elem. Sch.	Sumida 2-25-1	_	✓	✓	iii
37	Sumida Elem. Sch.	Sumida 4-6-5	_	1	✓	iii
38	Sakuratsutsumi J. H. Sch.	Tsutsumidori 2-19-1	✓	✓	✓	ĤĤ
39	Sumida City Athletics Ground	Tsutsumidori 2-11-1	1	<b>√</b>	✓	iii

- Be aware that city offices are not evacuation sites.
- Be aware that some evacuation sites may not open depending on the type of flooding (river flood, etc.)
- If you are evacuating with pets, put them in carriers and bring supplies such as a pet sheet and pet food.

Check this website to find out which flood evacuation sites are open and how full they are.

https://sumida.hinanjo.dmacs.jp/





<sup>\*2</sup> The reference point for Sumida City is the gauging station at the Iwabuchi Floodgates (upstream).