

さいたま市 内水ハザードマップ

Nishi Ward 西区 内水ハザードマップ

Saitama City Inland Water Hazard Map 埼玉市内涝水害予測地図 サイタマ市 内水ハザードマップ

◆内水ハザードマップとは What is Inland Water Hazard Map? 何謂内涝水害予測地図 内水ハザードマップ

この内水ハザードマップは、下水道の排水能力を超える大雨によって内水はん流が発生した場合に想定される浸水区域や浸水深等を、浸水シミュレーションにより示したものです。

日頃の備えや避難の際に役立てていただくなど、市民の皆様への自助・共助の促進を目的として作成しました。このマップの地図画面は、想定される浸水深20cmから5m以上まで6段階で色分けし、25m×25mの正方形で表示しています。この高さの浸水深を正確に、安全に移動できる避難ルートを確認してください。

雨の降り方や土地の形状の状況などにより、浸水区域や浸水深が地図と異なる場合もあるため、複数の避難ルートを考えておきましょう。

This Inland Water Hazard Map shows the inundation area and depth of inundation that can be anticipated in the occurrence of inland water flooding caused by heavy rainfall that exceeds the drainage capacity of the sewerage system, based on inundation simulation. It was prepared with the aim of promoting self-help and mutual-help among citizens by helping them prepare for everyday needs and evacuation. On this map's surface, the assumed inundation depths from 20 cm to more than 5 m are color-coded in six levels and indicated by a 25 m x 25 m square. Please check the depth of inundation in your area and make sure you have a safe evacuation route to move to. Consider multiple evacuation routes, as the flooded area and depth of flooding may differ from the map due to rainfall and changes in the shape of the land. 本内水ハザードマップは下水道の排水能力を超える大雨発生時、対照的浸水区域や浸水深等を浸水模擬試験で作成。材料とシミュレーションによる予測地図です。日頃の備えや避難の際に役立てていただくなど、市民の皆様への自助・共助の促進を目的として作成しました。このマップの地図画面は、想定される浸水深20cmから5m以上の浸水区域を6段階で色分けし、25m×25mの正方形で表示しています。この高さの浸水深を正確に、安全に移動できる避難ルートを確認してください。

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◆Conditions under which the Inland Water Hazard Map was created This map was prepared based on a simulation of inundation assuming that the maximum possible rainfall (maximum 153 mm, total rainfall 248 mm) would fall on the entire city of Saitama and the water level in the river to be discharged would be high. The information reflected in the inundation simulation is made based on topographical information such as ground elevation (based on the Geographical Survey Institute's laser surveying 5m mesh (elevation) approved by the Director of the Geographical Survey Institute of Japan (Use) 凡 5mメッシュ 1206 based on the Survey Act) and reflecting major rivers and sewers in the city. Furthermore, the information on sewerage storage facilities, pump stations, drainage pump stations, gates, etc. is as of the end of 2020.

◆Cautions for using the Inland Water Hazard Map Assumed inundation areas and inundation depths may vary depending on the type of rainfall, the shape of the land, and the maintenance situation of rivers and sewers. Therefore, it is not mean that the areas indicated on this map always get flooded during heavy rains, but rather that even areas not expected to be inundated may be inundated depending on the situation, so please be very careful. *This map does not take class A rivers overflow (flooding) into account, so please check the latest flood hazard map as well. *As we do not take reports of inundation information from citizens into account, please check the "Information on Flooding in Saitama City" available at the Information Disclosure Corner in each ward for past inundation information.

このマップで得られる情報 Information available in this map 通过此地图可获得 从 此地图可获得 的信息

1. 浸水発生メカニズム 1. Mechanism of How Inundation Occurs
2. 生命・財産を守る情報 2. Information to Protect Life and Property
3. 気象の情報 3. Weather Information
4. 関係機関の連絡先 4. Inquiries
5. 避難時の注意点 5. Precautions When Evacuating
6. 日頃からのことづけ 6. Daily Preparations
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<https://www.city.saitama.jp/001/006/003/002/001/p078773.html>

April, 2021

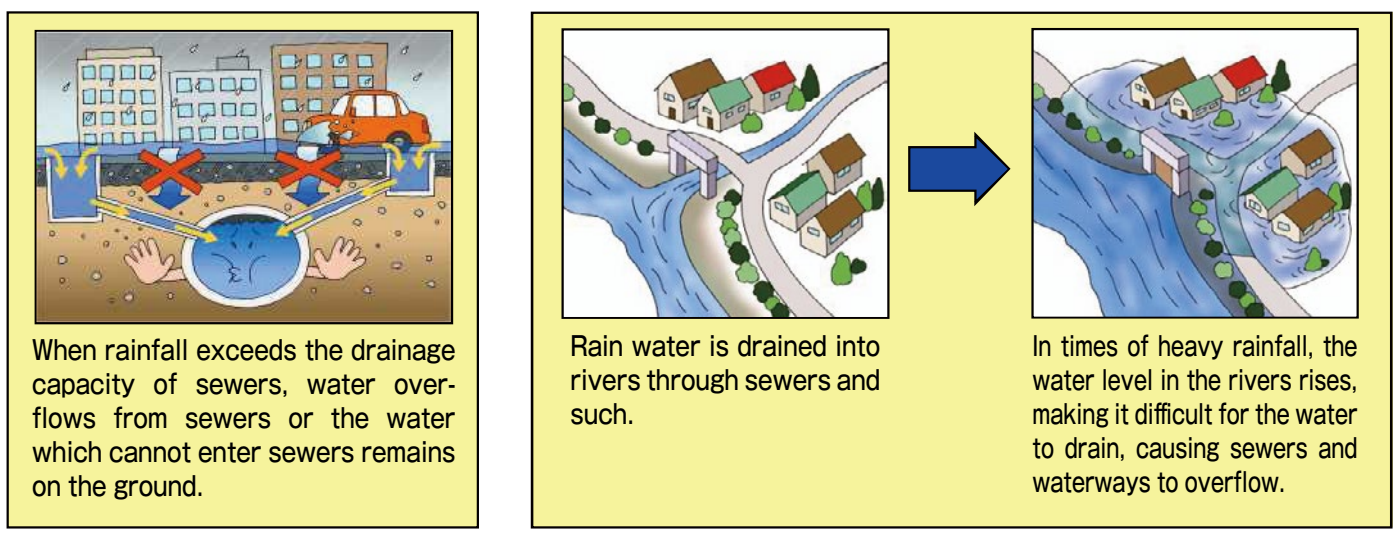
1. Mechanism of How Inundation Occurs

(1) Implementation level of Saitama City

Since Saitama City is located inland, rain water flows into Class A rivers managed by the national and prefectural governments. However, the amount of rain water discharged is limited depending on the implementation conditions of the rivers to which the rain water is discharged. As a measure of inundation prevention, Saitama City has implemented rainwater pipes and storm water storage facilities to cope with rainfall of about 56 mm per hour in accordance with the implementation conditions of the rivers where the rain water is discharged. In addition, Saitama City has elevated its flood control measures for the rivers managed by the City to make floodwater safely flow down in rivers caused by rainfall of about 30 to 50 mm per hour. However, in recent years, heavy rainfall exceeding the implementation level has occurred frequently due to the effects of climate change, and increased rainwater runoff due to the advancement of urbanization have caused inundation damages in low-lying areas where rain water is easily collected. Therefore, Saitama City will continue to further inundation prevention measures focusing on the three areas of "urban flooding prevention measures," "comprehensive inundation prevention measures," and "the rainwater runoff control measures."

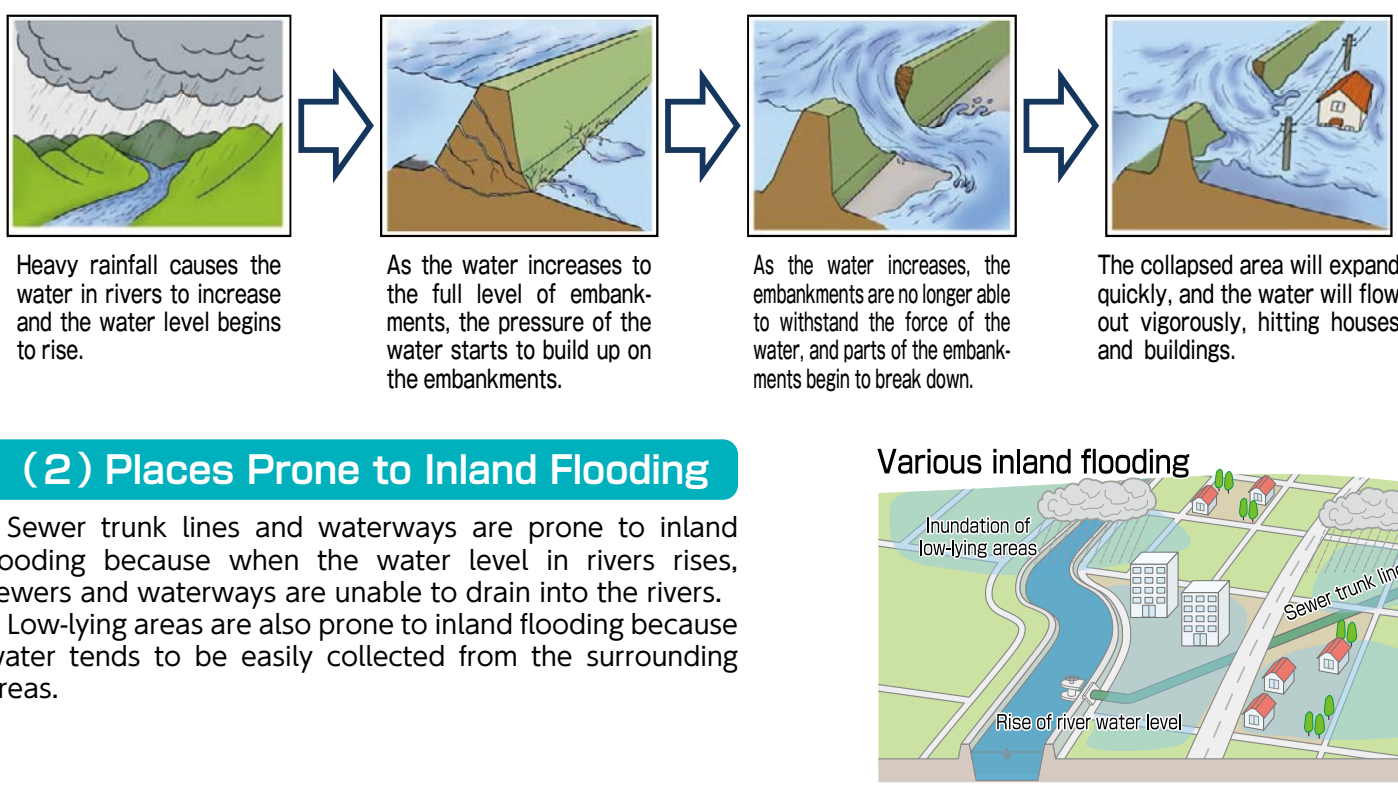
Mechanism of Inland Flooding

(Source: Ministry of Land, Infrastructure, Transport and Tourism (MLIT) website)



Mechanism of River Flooding

(Source: Ministry of Land, Infrastructure, Transport and Tourism (MLIT) website)



(2) Places Prone to Inland Flooding

Sewer trunk lines and waterways are prone to inland flooding because when the water level in rivers rises, sewers and waterways are unable to drain into the rivers. Low-lying areas are also prone to inland flooding because water tends to be easily collected from the surrounding areas.

2. Information to Protect Life and Property

(1) Evacuation information

Get information corresponding to each alert level ASAP and use it to make decisions on evacuation actions.

Alert Levels	Situations	Actions to be taken by citizens	Information to encourage actions
5	Occurrence or imminent threat of a disaster	Your life is in danger. Immediately ensure safety!	Emergency safety securement
Evacuate before the alert level reaches 4!			
4	There is high risk of occurrence of a disaster	Evacuate all people from dangerous areas	Evacuation instructions
3	There is a risk of occurrence of a disaster	Evacuate the elderly, etc. from dangerous areas	Evacuation of the elderly, etc.
2	Weather conditions worsen	Confirm your own evacuation behavior	Heavy rain/Flood / Storm surge advisory (Japan Meteorological Agency)
1	There is a risk of worsening weather conditions in the future	Increase preparedness for disasters	Early warning information (Japan Meteorological Agency)

It is important to evacuate at the alert level 3 or 4. It will be impossible to evacuate because a disaster has already occurred in a situation where the alert level is 5. If heavy rainfall continues, there is an increased risk of river flooding.

(2) Gathering information

Information is sent via both push notifications (notifications sent automatically) and pull notifications (notifications that one gets by themselves). Some push notifications are delivered automatically, while others can be delivered automatically by registering in advance. Pay close attention to weather and river-related warnings, and evacuation information; and remain calm, judge and act promptly.

Email Notification

- Emergency Warning E-mail/ Area E-mail
- Saitama City Wireless Disaster Prevention System E-mail
- Disaster Prevention Wireless Telephone Service

Weather information

River water level information

Disaster Prevention Information

Yahoo Weather app.

3. Weather Information

(1) Warnings and alerts issued by the Japan Meteorological Agency

When issuing warnings and alerts, not only the amount of rainfall, but also the amount of rainfall in the upstream area and the time it takes to flow down from the upstream areas are considered. In addition, the warnings and alerts will be continued when there is a risk of a disaster due to the rain infiltrated in the ground.

[Types] [Period of announcements]

Heavy rain special warning	When typhoons or torrential rains are expected to cause heavy rains with precipitation once every several decades.
Heavy rain warning	When heavy rains could cause severe disasters.
Flood warning	When flooding could cause severe disasters.
Record short-time heavy rain information	Heavy rains for a short period of time, which only occurs once every few years, are observed or analyzed when a heavy rainfall warning is issued. *In the case of Saitama City, the amount of rainfall in one hour is 100 mm or more.
Heavy rain advisory	When heavy rains could cause disasters.
Flood advisory	When flooding could cause disasters.

(2) Rainfall guide

We can roughly grasp the amount of rainfall by observing how the rain falls. By knowing the relationship between how the rain falls and the amount of rainfall can help us make decisions to evacuate before the condition becomes dangerous.

Rainfall Intensity (rainfall per hour)	Moderate - heavy (10-20mm)	Heavy (20-30mm)	Very heavy (30-50mm)	Extremely heavy (50-80mm)	Torrential (over 80mm)
Characteristics	Rain showers	Downpour	Coming down in buckets	Raining like a waterfall	Oppressive feeling such as breathing difficulties and feeling frightened.
Impact on people	Rain splashing off the ground wetting your feet.	Get wet even when using an umbrella.	Umbrellas have no effect in the rain.		
Conditions in the inside (of wooden houses)	Conversation can't be heard due to the sound of the rain.		Sleepless night due to the rain.		
Conditions in the outside	Puddles in the ground.	Streets are flooded like a river	Bad visibility due to the rain		
When in a car	Difficult to see even when wipers are on full speed.	Brake fails to work due to a layer of water building up between the tires and the road surface when driving at high speed.	Road conditions are too dangerous to drive.		

This is a guideline for actions to take during heavy rainfall. As the rainfall intensity, geographic features and land use affect the degree of risk in communities so it is important to pay close attention and surrounding situations; and remain calm, judge and act accordingly.

4. Inquiries

5. Precautions When Evacuating

6. Daily Preparations

7. Tell Me, Mr. Nu!

(1) Contacts

Contact details

◆Prepare for Inundation

- Disaster Prevention Measures
- Flood Hazard Map

◆During an Inundation

- When your property or roads are inundated
- Information on situation of evacuation shelters
- Ambulance or Fire Department service required for urgent situations

◆After suffering from Inundation Damage

- Issuance of Disaster Victim Certificate
- Disinfection of flooded roads

Useful Contact Methods in times of a disaster

When a large-scale disaster such as a flood or an earthquake occurs, phone calls to the affected areas are concentrated and it becomes difficult to connect. If you are in such a situation, in order to perform confirmation of the safety of family members and acquaintances, or to make contact with evacuation sites smoothly, "the Disaster Message Dial service", which allows users to register messages in "voice form," and "the Disaster Message Board service", which allows users to register messages in "text form," are provided using fixed-line phones, cell phones, and the Internet.

Use of the "Disaster Message Dial 171"

This is a service provided by NTT that allows you to save and play back messages regarding the information such as the safety of your family members in times of a large-scale disaster.

Inundation may occur suddenly due to localized heavy rainfall so keep in mind to take prompt action. Walking becomes difficult even at a water depth of about 20 cm depending on the flow of water. It is dangerous for the elderly and children. If you fall behind, stay in a high place and wait for rescue.

Gather the accurate information and evacuate on your own initiative

Pay attention to calls for evacuation

Evacuate in comfortable clothes and in pairs or with more persons

Avoid evacuating by car

Use caution in places such as underpasses

There are many multi-level crossing in Saitama City. It is necessary to avoid underpasses and such in times of inundation especially those that are expected to increase in depth when inundated.

(1) Advance preparations

Preparedness at buildings

- Clean the ditches and the rainwater basins.
- Avoid placing things such as car step slopes on top of ditches and basins.
- Pick up the things around your building in preparation for flooding.
- Board up glass windows without shutters from the outside in case flying objects enter.
- How to make a simple sandbag
- Advance preparations in the Family

(2) Emergency items and stockpiles

Checklist

Emergency bag

Stockpile

Mr. Nu is going to teach us about this hazard map!

Q1 Are non-colored areas on the hazard map safe?

Q2 What is the difference between this map and the previous inundation (Inland Water) Disaster Prevention Map?

Q3 What is the difference from the Flood Hazard Map?

Q4 How should I use the Inland Water Hazard Map?

Q5 Will you take measures to eliminate inundation in the places that are expected to be inundated in the Inland Water Hazard Map in the future?

Q6 Do such large-scale inundation damages actually occur?

Q7 What is this simulation like?

Q8 This hazard map is created based on the estimated maximum amount of rainfall but is there any possibility that an inundation damage greater than this will occur?

Q9 It is difficult to distinguish the colors of the estimated inundation areas. Is there any map easier to see?

(2) Disaster prevention memo for my family

My Family's Evacuation Site 1: _____ Family Gathering Place: _____

My Family's Evacuation Site 2: _____ Contact information in times of a disaster: _____

Name	Blood type	Phone number	Company / school name	Company / school contact information

Contact information regarding Saitama City Inland Water Hazard Map

- Sewer Planning Division, Sewer Department, Construction Bureau
- River Division, Civil Engineering Department, Construction Bureau
- Disaster Prevention Division, Department of Risk Management, General Affairs Bureau

The potential danger of underground space/facilities.

Water flows in at a stretch when the ground level is flooded.

Water may enter through unexpected places such as ventilation holes and windows. Also, you can't walk up the stairs due to the flowing water.

Electrical power may be cut off in times of inundation.

Can't open the doors due to water pressure

(3) Creating My Timeline

"My Timeline" is to make a "disaster prevention action plan" for each resident.

Water level of a river rises because of the approach of a typhoon, organize the standard disaster prevention actions you will take in the "Saitama City My Timeline" in preparation for wind and flood disasters.

Requests to all local residents from Mr. Nu!

Please read this hazard map on a daily basis and prepare for inundation damages! (**)

For more information, please see the Q & A on our website at <https://www.city.saitama.jp/001/006/003/002/001/p078773.html>

Mr. Nu