さいたま币 内水ハザードマップ tama City Inland Water Hazard Map 埼玉市内涝灾害预警地图 사이타마시 내수해저드 지도

- ◆内水八ザードマップとは What is Inland Water Hazard Map? 何谓内涝灾害预警地图 내수해저도 지도 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濫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。
- このマップの地図面では、想定される浸水深20cmから5m以上までを6段階で色分けし、25m×25mの正方形で表示しています。 お住まいの地域の浸水深を確認し、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変化などにより、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 neavy rainfall that exceeds the drainage capacity of the sewerage system, based on inundation simulati
- 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 × 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. 本内涝灾害预警地图基于超出下水道排水能力的大雨导致内涝泛滥时、对预测的淹水区域及淹水深度等进行淹水模拟试验而制作。
- 制作本地图是以备在日常防灾准备及避难时发挥作用等,为的是加强广大市民的自助、互助意识 比地图上以25m × 25m正方形区块,将预计淹水深度20cm至5m以上的区域分为6个等级,以不同颜色标示。 请确认居住地区的淹水深度、以及可移动至安全场所的避难路线。 淹水区域及淹水深度可能会因降雨方式或土地形状的变化而与地图标示产生差异,故请确保多条避难路线。
- 이 내수 해저드 지도는 하수도의 배수 능력을 초과하는 집중 호우에 의해 내수 범람이 발생했을 경우에 상정되는 침수 구역과 침수 깊이 등을 침수 시뮬레이션을 통해 보여준 것입니다 평소의 준비와 피난시에 참고로 하시는 등 시민 여러분의 자조와 공조의 촉진을 목적으로 작성되었습니다.
- 이 지도의 지도면에서는 예상되는 20cm~5m 이상까지의 침수 깊이를 6 단계로 색으로 분류하여, 25m×25m의 정사각형으로 표시하고 있습니다 거주하시는 지역의 침수 깊이와, 안전하게 이동할 수있는 대피 경로를 확인하여 주십시오. 비가 내리는 경향이나 토지의 형태 변화 등으로 인해. 침수 구역과 침수 깊이가 지도와 다를 수 있기 때문에 여러 피난 루트를 검토해 두시기 바랍니다
- 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 249 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) R 2JHs 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 does 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.

MINAMI

☎ 048-838-1111

🕿 119

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このマップで得られる情報 扶信息 이 지도에서 얻을 수 있는 정보

- 1. 浸水発生のメカニズム 評理 1.침수 발생의 구경
- ation to Protect Life and Property 2. 生命・財産を守る情報 信息 2.생명•재산을 지키
- 3. 気象の情報
- 4. 関係機関の連絡先 方法 4.관계 기관의 연락처
- ecautions When Evacuating 推注意事项 5.피난 시의 유의 5. 避難時の注意点
- 6. 日頃からのこころがけ aily Preparations 常注意事项 6.평소에 마음의 준t
- 7. Tell Me, Mr. Nu! 7. 教えてヌゥ先生! 7.가르쳐 줘 누선생님

https://www.city.saitama.jp/001/006/003/002/001/p078773.html

4. Inquiries

(1) Contacts

Contact details

- Prepare for Inundation O Disaster Prevention Measures
- Flood Hazard Map

ty Inland Water

azard Map

- During an Inundation
- When your property or roads are inundated ⋮ Minami Ward Office 🔘 Information on situation of evacuation shelters 🗄 General Affairs Division, Department of Daily Life Affairs of Ward Residents, Minemi Ward Office 🗄 🕿 048–844–7123
- Ambulance or Fire Department service required for urgent situations
 Fire Bureau
- After suffering from Inundation damage
- 🔿 Issuance of Disaster Victim Certificate 🗄 General Affairs Division. Decertment of Daily Life Affairs of Ward Residents. Winemi Ward Office 🗄 🕿 048–844–7123 Daily Life Support Office, Minami Ward 2 048-844-7136 O 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. Recording method Guidance will be played

Method of reproduction of recorded message G	Guidance will be played		Guidance will be played
Dial 171		To playback a message 2	

Disaster Prevention Community Development Information Map

Saitama City uses the geographic information system (GIS) "Saitama City Map Information" on its website (https://www.sonicweb asp.jp/saitama_g/), which provides the risk information etc. on earthquake disasters such, as well as the various disaster prevention maps such as the Flood Hazard Map of class A rivers. You can check the pinpoint and the familiar information on disaster risks by entering your home address.

(2) Disaster prevention memo for my family

My Fan	nily's Evacuation Site 1				Family Gathering Place			
My Fan	nily's Evacuation Site 2	2				Contact information in times of a disaster		
	Name	Blood type	Phone number	Company	/ school name	Company / school contact information		
Family								
contact								
information								

ntact information 🛛 🔄 Sewer Planning Division, Sewer Department, Construction Bureau 🛛 TEL 048-829-1566 🛛 FAX 048-829-197

River Division, Civil Engineering Department, Construction Bureau TEL 048-829-1585 FAX 048-829-19

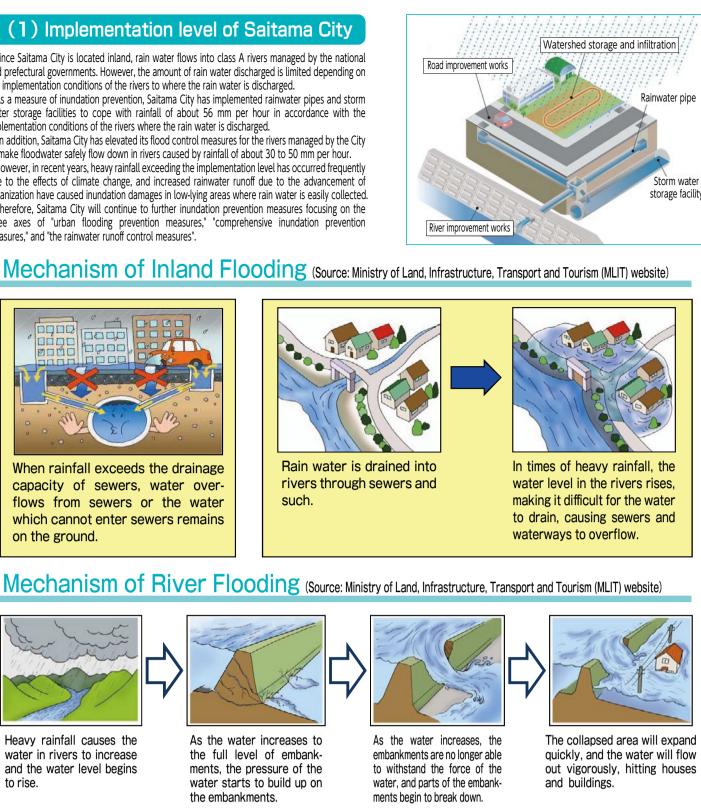
(1) Implementation level of Saitama City

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 where 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

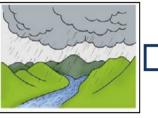
implementation conditions of the rivers where the rain water is discharged. In addition, Saitama City has elevated its flood control measures for the rivers managed by the City to make floodwater safely flow down in rivers caused by rainfall of about 30 to 50 mm per hour. However, in recent years, heavy 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 axes of "urban flooding prevention measures," "comprehensive inundation prevention measures," and "the rainwater runoff control measures".





When rainfall exceeds the drainage capacity of sewers, water overflows from sewers or the water which cannot enter sewers remains on the ground.



Heavy rainfall causes the water in rivers to increase and the water level begins to rise.

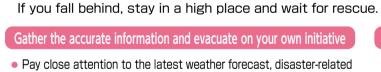
As the water increases to the full level of embankments, the pressure of the water starts to build up on the embankments.

(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.

5. Precautions When Evacuating

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.



- and evacuation information from radio.TV and internet
- Keep an eye out on the how the rain falls and the inundation situation. If you feel there is danger, evacuate on your own initiative.
- acuate in comfortable clothes and in pairs or with more perso
- Keep in mind to wear comfortable clothes and in pairs or
- with more persons when evacuating.

Avoid evacuating by car • Evacuation by car will block emergency vehicles. In addition, driving a car on

a flooded road may cause problems with engine or the like, and make it impossible to move. Do not drive on flooded roads unless in extreme cases. Do not leave your car on the road or



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.

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. If electrical power is cut off, there will be

a blackout and darkness. And elevators will be out of order.



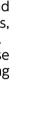


Disaster Prevention Division, Department of Risk Management, General Affairs Bureau 🗄 🅿 048-829-1126

Disaster Prevention Division, Department of Risk Management, General Affairs Bureau 🗄 🕿 048–829–1126

1. Mechanism of How Inundation Occurs

Various inland flooding



Inundation of low-lying areas

Pay attention to calls for evacuation

 When danger is approaching, the city hall or fire department may call for evacuation.

Please evacuate immediately when you hear the evacuation call.



ssist the evacuation of elderly people etc

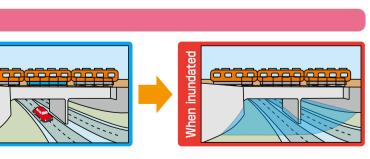
- Those in need, such as elderly people, children, and the handicapped, must evacuate
- sooner. Help those around you to evacuate.

you fall behind.

 Evacuate to as higher floor as much as possible in a sturdy building nearby and wait for rescue. Even the second story of residential



houses can be dangerous. Move to the rooftop if necessary. Ensure your own safety by practicing vertical evacuation.



We don't know the condition outside the basement It is necessary to pay close attention to the latest weather forecast while inside the basement it's hard to notice the rain condition and the rapid change of weather. Also, let the people in the basement know if the conditions have changed.

Can't open the doors due to water oressure

If it is inundated to a certain extent, doors may not open from neither inside or outside



Alert

Levels

5

4

З

Situations

Occurrence

or imminent

There is

high risk of

occurrence

here is a

of a disaster

risk of

List of new alert levels*

Actions to be

Your life is

in danger.

Evacuate before the alert level reaches 4!

Evacuate all

people from

Evacuate the

elderly, etc.

ccurrence from dangerous the elderly, etc

dangerous areas

threat of a Immediately

disaster ensure safety!

taken by citizens encourage actions

Information to

Emergency

securement

Evacuation

instructions

Evacuation o

safety

(1) Evacuation information

Get information corresponding to each alert level

municipal and judge whether to evacuate or not on

your own, even if evacuation information have not

It is important to evacuate at the alert level 3 or

disaster has already occured in a situation where

If heavy rainfall continues, there is an increased

(2) Gathering information

4. It will be impossible to evacuate because a

ASAP and use it to make decisions on evacuation

Pay attention to the announcements of

evacuation information and others from your

actions.

been issued.

the alert level is 5.

risk of river flooding.

' a disaster areas Information is sent via both push notifications (notifications sent automatically) and pull Heavy rain/Flood Weather Confirm your notifications (notifications that one gets by Storm surge advisor 2 conditions own evacuation themselves). Some push notifications are delivered Japan Meteorologic behavior worsen automatically, while others can be delivered Agency) automatically by registering in advance. Pay close There is a risk Early warning Increase attention to weather and river related warnings, of worsening information preparedness and evacuation information; and remain calm, Japan Meteorological weather conditions for disasters judge and act promptly in the future Agency) * Implemented from May 20, 2021 **Email Notification** Emergency Warning E-mail/ Area E-mail Users of cell phones (NTT Docomo, KDDI/Okinawa Cellular (au), Softbank, and Rakuten Mobile) in the distribution target municipalities can automatically receive the evacuation information delivered from the municipal governments Saitama City Wireless Disaster Prevention System E-mail You can automatically receive the contents such as the emergency information broadcasted on the Wireless Disaster Prevention System, by registering in advance. URL https://www.city.saitama.jp/001/011/015/004/002/p054192.html Disaster Prevention Wireless Telephone Service The service delivers the evacuation information, etc. to landline phones and faxes for those who do not have cell phones or smartphones and have difficulty using email, etc. URL https://www.city.saitama.jp/001/011/015/004/002/p071187.html Weather information -River water level information -- Disaster Prevention Information You can get information on You can get information on the water levels, You can get hazard map and warnings. live cameras, etc. of rivers and sewers. information on disaster preparedness Ministry of Land, Infrastructure, Transport and Tourism Weather information including Crisis Management, Disaster Prevention (MLIT) - Information on River Disaster Prevention and Weather Information of Saitama City the warnings from Saitama City https://www.city.saitama.jp/ https://saitama-city.bosai. https://www.river.go.jp/ info/ui/dashboard portal/#80 Saitama City Water Level Yahoo Weather app. Information System Flood Hazard Map of Saitama City https://weather.yahoo.co.jp/ https://www.city.saitama.jp/ 001/011/015/002/003/ p008311.html https://www.flood-info.citv. saitama.jp/JP/index.html p008311.html 6. Daily Preparations (1) Advance preparations Preparedness at buildings Clean the ditches and the rainwater basins. Rainwater basir • 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. If there is a risk of flooding, move important household goods to the second floor or a higher, safer place. Rainwater basin How to make a simple sandbag If the water depth is shallow, use household items such as garbage bags, Car step slope leisure sheets/mats and planters as emergency measures. (Using Garbage Bags) Double bag garbage bags, fill with water halfway (leftover bath water is convenient and place them next to each other without any gaps or space. Putting the water-filled bags inside lined cardboard boxes will increase the strength and makes them stackable. (Using Leisure Sheets) Line soil-filled planters in a row and wrap them in plastic leisure sheets to strengthen the barrier. You can also use water-filled plastic tanks or heavy beer cases instead of planters. Advance preparations in the Family • Store water for daily use. (Drinking water should be 3 liters per person per day.) • Decide the route to the designated emergency evacuation site in advance, and make sure that it is safe to pass through. (2) Emergency items and stockpiles In times of a large-scale disaster, it is said to take approximately three days for relief goods to reach the disaster If there are any items particularly necessary corresponding to the family structure, such as the elderly and infants, add them area. For emergency items, select, at minimum, the basic supplies and store them in one place where you can take to your emergency or stockpiling list. them out immediately. Also, prepare stockpiles to support you for several days when evacuating at home and Regularly check the storage conditions and expiration dates of emergency items separately until recovery from the disaster. In particular, buy a little more of food and drinking water emergency items, and replace them with new ones as needed. than usual on a regular basis, and keep in mind the idea of "rolling stock" by repeating daily consumption and buying. Checklist Daily necessities Medical subplies Others Sanitarv suppl Drinking water Valuables Portable radio(spare batteries) First aid kit Tissues Helmet and Emergency food (deposit passbook Flashlight(spare batteries and bulbs) (band aids, (wet type also) disaster hood (simple food such as seal. etc.) Candles and lanterns antiseptic solution. Towels Clothes (tops and hardtack, canned food. Cash nutritional Sanitary items underdwear) Lighter(match) candy, chocolate, etc.) Driver's license Knife, can opener, and bottle opener supplements) Masks Basic medicines Disinfectant Health insurance Plastic bags (prescription record) Emergency bag Disposable body warmers Water(3 liters pe Fuel(tabletop stove, solid fue Toiletries Blankets day per person) spare gas cylinders, etc.) Wet wipes Towelettes Sleeping bags Foodstuffs Simple tableware Toilet paper (canned food, retort food, (chopsticks, paper plates, paper cups, etc.) Simple toilet Plastic wrap, aluminum foil, etc. seasonings, soup, etc.) Spare glasses, hearing aids, etc. Tools Stockpile (rope, crowbar, shovel, etc.) *Other things you need to prepare for infection control (3) Creating My Timeline "My Timeline" is to make a "disaster prevention action plan" for each resident. When the 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" (Create a "My Timeline" in preparation for wind and flood disasters: https://www.city.saitama.jp/001/011/015/003/003/p063827.html). Also, check the height of your area on the GSI's website (https://www.gsi.go.jp/) or Saitama City's website (https://www.city.saitama.jp/001/010/014/008/p047050.html). In general, low places tend to accumulate water

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 heavey 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.
	*For more information on the criteria applicable to heavy rainfall and flood warnings, and each rainfall index, please refer to the Japan Meteorological Agency website.

(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.

	Moderate - heavy (10-20mm)	Heavy (20-30mm)	Very heavy (30-50mm)	Extremely heavy (50-80mm)	Torrential (over 80mm)
Rainfall Intensity (rainfall per hour)					
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 wher	n 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 t	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.		ditions are bus 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.

7. Tell Me, Mr. Nu!

Mr. Nu is going to	teach us about this hazard map!
?	
	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?
	A5 The hazard map has been created to promote self help and mutual
Q Are non-colored areas on the hazard map safe?	assistance of evacuation. Therefore, inundation prevention measures will not be developed to eliminate all inundation assumptions on the hazard map, but will be developed in accordance with the development standards of Saitama City.
The hazard map is a colored map that highlights areas which are at high risk of inundation. Since areas with inundation depth of less than 20 cm are not shown, please note that inundation may occur even in non-colored areas.	Q6 Do such large-scale inundation damages actually occur?
What is the difference between this map and the previous Inundation (Inland Water) Disaster Prevention Map? The previous Inundation (Inland Water) Disaster Prevention	As for the estimated maximum amount of rainfall, the estimated maximum amount of rainfall at the present moment is set, using the results of available meteorological observations, etc. based on the current scientific knowledge. In fact, Katori City in Chiba Prefecture observed 153 mm of rainfall per hour in 1999.
Maps have been created by considering topographical information based on the information reported by citizens. The new hazard map is created based on a flooding simulation on the assumption that the estimated maximum amount of rainfall (153mm	What is this simulation like?
per hour) falls on Saitama City set by the national government.	It is a comprehensive analysis of how the city will be inundated if the estimated maximum amount of rainfall falls on the entire area of Saitama City by reproducing in a computer topographical information such as ground height, drainage facilities such as major sewers and water channels,
the Flood Hazard Map?	and the conditions of the rivers to where rain water is discharged or the like.
A3 The Inland Water Hazard Map shows the areas that are expected to be inundated when rainfall far exceeds the drainage facility capability of sewers. The Flood Hazard Map shows the areas possibly to be	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?
flooded when a class A river overflows. The Inland Water Hazard Map does not consider flooding of class A rivers. If you live near a class A river, please check both maps.	AB There is a limit to computer performing inundation simulations, which are not able to reflect small steps in sidewalks, small water channels, or clogged rainwater basins, so the simulation results will not be exactly the same as the actual phenomena. Also, please note that inundation areas and depths will change depending
How should I use the Inland	on how rain falls, even if the amount of rainfall is same.
Water Hazard Map:	It is difficult to distinguish the colors of the estimated inundation areas. Is there any map easier to see?
You should check the areas around your home, school, workplace and the places you pass by regularly to make sure how much flooding is expected to happen and where the high-risk areas are. The Inland Water Hazard Map also includes information on evacuation, preparations to minimize inundation damages, and precautions to be taken during heavy rain. Please read it carefully and prepare for flood damages on a daily basis.	According to the national regulations, this color scheme is used for uniformity among local governments and for consideration of people with color blindness, etc. There are no printed maps, but the Saitama City website provides a map with a different color
	arrangement. You should check it out.
Requests to all local residents from <i>N</i> Please read this hazard map on a dai	Mr. Nu Ar. Nu! ly basis and prepare for inundation damages! (^^)
	see the Q & A on our website at /006/003/002/001/p078773.html