#### Household Disaster Information Sheet Discuss as a family and fill in the information below

Emergency Contacts *	Emergency Contacts *If calling from a mobile phone or from outside the city, add the area code (054).							
Contact	Tel	Contact	Tel					
Shida Fire Headquarters Information Command Division	623-1119							
Yaizu Police Department	624-0110							
Yaizu City Hospital	623-3111							
Yaizu City Hall	626-1111 (main no.)							
Yaizu City Waterworks General Affairs Section and Waterworks Engineering Section	624-0111							
Public Broadcast Telephone Replay Service	656-2727							

#### Emergency contact information of family, relatives and acquaintances

- in the state of							
Name	Tel	Notes	Name	Tel	Notes		

#### **Evacuation Center**

Evacuation Center	Evacuation center designated by the community	
Assembly point in case the family is separated		

#### Disaster Voicemail **Disaster Message Board**

When disaster strikes, phone lines get congested, and it can be difficult to get in touch with loved ones. In such situations, call the number 171 and follow the instructions to record or playback audio messages. NTT will decide on the method of use, such as when the service will be started and how many messages can be recorded, and the information will be publicized on television and radio.





\*The disaster voicemail service can be used with home phones, public phones and mobile phones.

#### Disaster Message Board Web1 (https://www.web171.jp/)







You can also check messages from your PC (only during \*For more details, contact your mobile phone service provider

#### Inquiries related to the Yaizu City Flood Hazard Map

On flooding assumptions

Yaizu City Department of Construction, **River Division** 

Tel: 054-626-1118 Fax: 054-626-9416 Email: kasen@city.yaizu.lg.jp On evacuation

Yaizu City Disaster Preparedness Department, **Regional Disaster Preparedness Division** 

Tel: 054-623-2554 Fax: 054-625-0132

Email: tiikibousai@city.yaizu.lg.jp

Published March 2022

# Yaizu City 🔘 Flood Hazard Map Guidebook **Permanent version**



The Yaizu City Flood Hazard Map compiles information on the expected flooding that can occur if the 13 rivers including Oigawa River and Setogawa River overflow after receiving once-in-a-millennium downpours. The map also contains information on evacuation and taking refuge.

Following The Basic Act on the Disaster Management (revised in May 2021), the name of the evacuation information has been changed.

#### Check the evacuation information and alert levels.

	Alert Level	Evacuation Information	Actions to Take					
	5	Emergency Safety Measures (issued by the city)	Life-threatening. Seek safety immediately.					
	<b>Evacuate by Alert Level 4!&gt;</b> Make sure to evacuate when Alert Level 3 and Alert Level 4 are issued. Do not wait for Alert Level 5!							
Important inform	4	General Evacuation Order (issued by the city)	Evacuate immediately.					
Important evacuation information	3	Evacuation of the Elderly and Vulnerable (issued by the city)	The elderly and vulnerable should evacuate immediately.  People who require additional time to evacuate should begin evacuating promptly, along with their caregivers.					
	2	Heavy Rain and Flood Advisories (published by JMA)	Check your evacuation plan.  Check your evacuation center and the route to get there, as well as the things you will take with you.					
1 Early Warning (published by JMA) Mentally prepare yourself for a di								

Be sure to evacuate when or before a General Evacuation Order (Alert Level 4) is issued.

#### Past floods in Yaizu City

●1974 Tanabata Downpour Asahina River breach



The evacuation (Higashimashizu Elementary School)

1982 Typhoon No. 18 Setogawa River breach



Immediately after the banks burst (Ekikita district)

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Cu	Ilture related to flooding	
In th	e city, there are still remains and culture that remind us of the history of people living	1

in the basin and the floods they experienced.

The Boat-shaped Mansion

Fearing the flooding of Oigawa River, people came up with the idea of building the "mansion shaped like the bow of a ship."

The land around the mansion was shaped in a sharp triangle pointing upstream to prevent the intrusion of water.



#### Bato Kannon

There is a legend that the Bato Kannon protected the city from Setogawa River bursting its banks and causing a flood. It is called the River

Defense Jizo-san.



## Use the Flood Hazard Map to think about evacuation

#### 1 General information on disasters

Disasters don't just happen to other people. They can happen to you, and it is important to prepare for emergencies in your day-to-day life.

# Know that heavy rains are becoming more frequent.

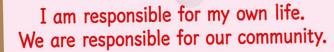
Weather patterns are changing due to climate change, causing disasters due to heavy rainfall all across the country.





## Imagine what would happen if a flood occurred.

By thinking about what could happen if a flood occurs - before it happens - you can start taking life-saving action.



It is important to take the fundamental stance that when disaster strikes, you must be responsible for saving yourself, and everyone in the community must help each other.



# Stay up to date with information on the weather and rivers.

It is important to stay informed with the latest information on the weather, the amount of precipitation, water levels in the rivers, and other information that you need to stay safe and take action. You can follow the changing developments on TV and the internet.

Unlike earthquakes, floods don't happen suddenly. If you prepare in advance, you can calmly evacuate and take refuge.

Now take a look at the hazard map!





## Gather information on evacuation and taking refuge.

Evacuation and refuge information, such as the city's evacuation instructions, is available from many sources, such as TV, Yaizu disaster notification e-mails, the Yaizu City LINE account, and wireless broadcasts.

## Understanding evacuation and taking refuge

The point of evacuating and taking refuge is to ensure one's safety. It's not simply about going to an evacuation center. If the location you are currently at is a safe place, you can also take refuge right where you are. And if you can find safety in your own home, the home of a friend or relative, or even a hotel or other accommodation facility, then you can also take refuge there.





Managers and users of special care facilities\*1 should check flood depths in advance and discuss evacuation and refuge methods. In special care facilities, it is also required to create evacuation plans.

Yaizu City Evacuation Plan



 "Special care facilities" refers to facilities used by people who require special care when a disaster occurs, such as social welfare and healthcare facilities.



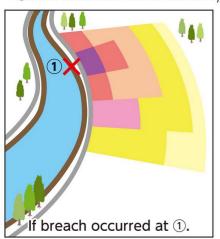
#### 2 Information on the map aspects of the Flood Hazard Map

#### Flood inundation area maps

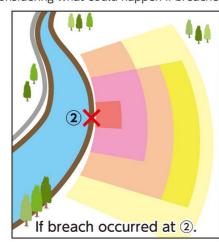
The flood hazard map includes flood inundation area maps. These are color-coded maps showing the extent and depth of flooding, based on simulations of the maximum expected rainfall.\*

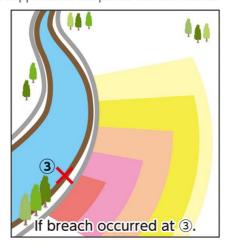
#### Flood simulation

•Flood simulations are carried out by considering what could happen if breaches happened at the points marked with X.



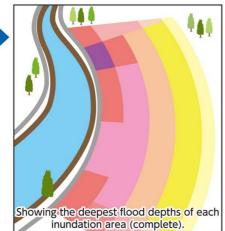
[IMPORTANT]





Combine maps 1 to 3.

The Yaizu City Flood Hazard Map combines the flood inundation area maps of each relevant river. This does not mean that all of the areas will be flooded in a single flood. In addition, sections that have not been colored can still experience flooding due to the effects of storm surges, etc.



Search v

•These maps show the deepest flood depths of each inundation area.

Flood inundation area maps

#### If you want to know the extent and depth of flooding for each river

You can check the online version of the Yaizu City Flood Hazard Map. (PC and mobile compatible.)

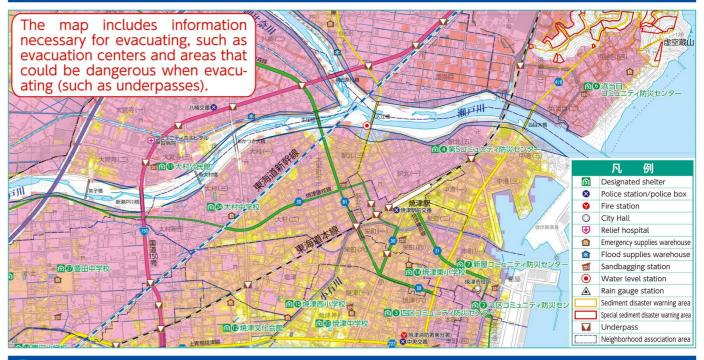
Yaizu City Flood Hazard Map



\*"Maximum expected rainfall" refers to the heaviest expected rainfall that has a probability to occur once in 1,000 years.

Although the probability is extremely low, the maximum amount of rainfall has been estimated taking into consideration the increasing severity of water disasters in recent years.

#### Information included



#### On flood depths



#### Flood depths and what they mean

5.0m: At this depth, two stories of a standard house will be fully submerged.

3.0m: The height of the second floor of a standard house. If waters exceed this depth, taking refuge on the second floor may become dangerous.

0.5m: The height of the first floor of a standard house. If waters exceed this depth, the first floor may be flooded.

#### Area at risk of houses collapsing and other damage

If embankments burst, there are areas alongside rivers that are at risks of houses collapsing due to strong currents (flood currents), as well as areas where the strong currents can erode the ground (riverbank erosion). These areas are called "areas at risk of house collapse and other damage."

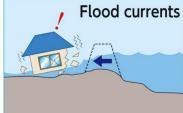
In such areas, it is necessary to evacuate to a location that is certain to be safe.

(Display on the map)

Flood currents (purple)

(Rivers with risk areas) Oigawa River







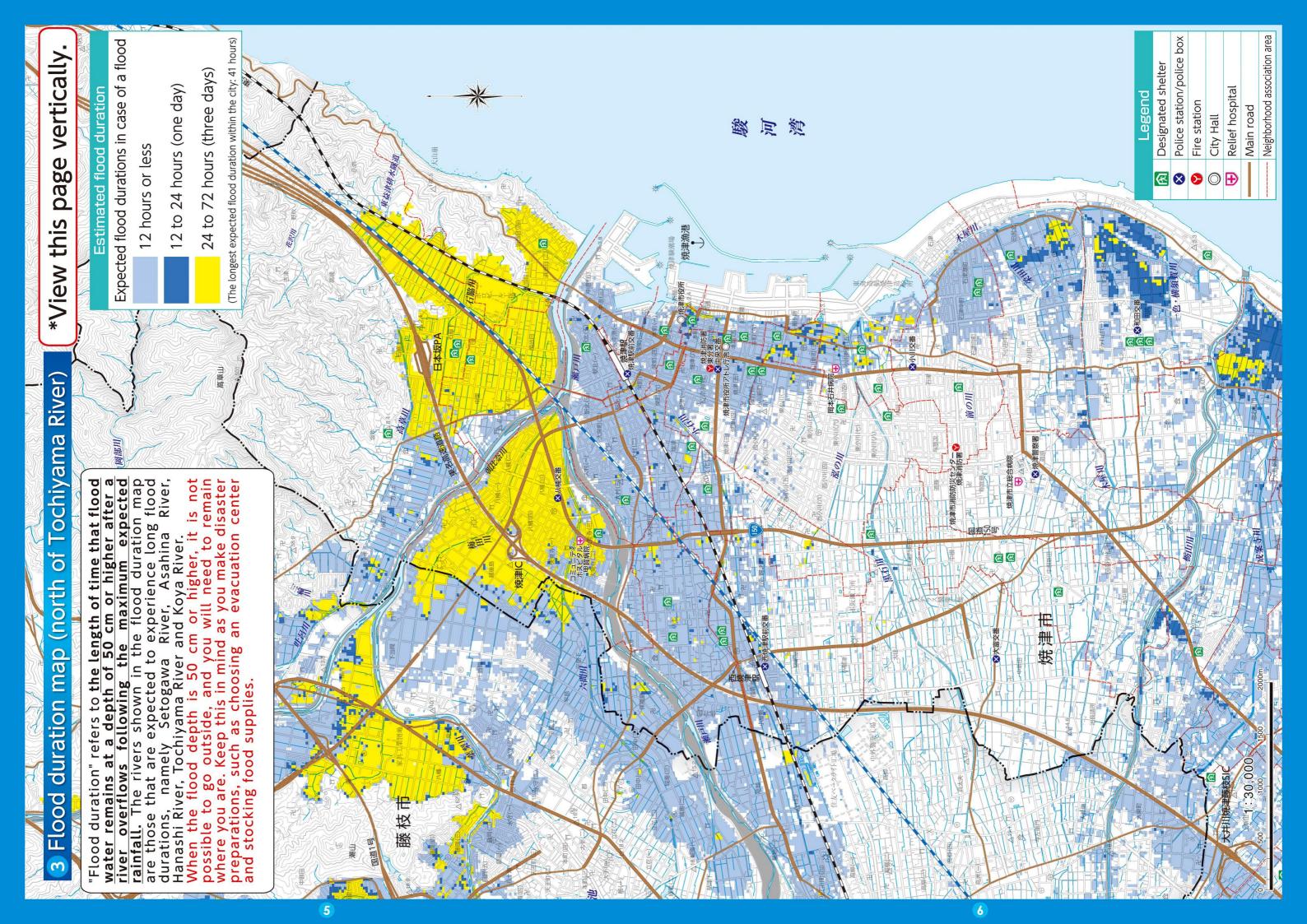
Riverbank erosion (dark indigo)

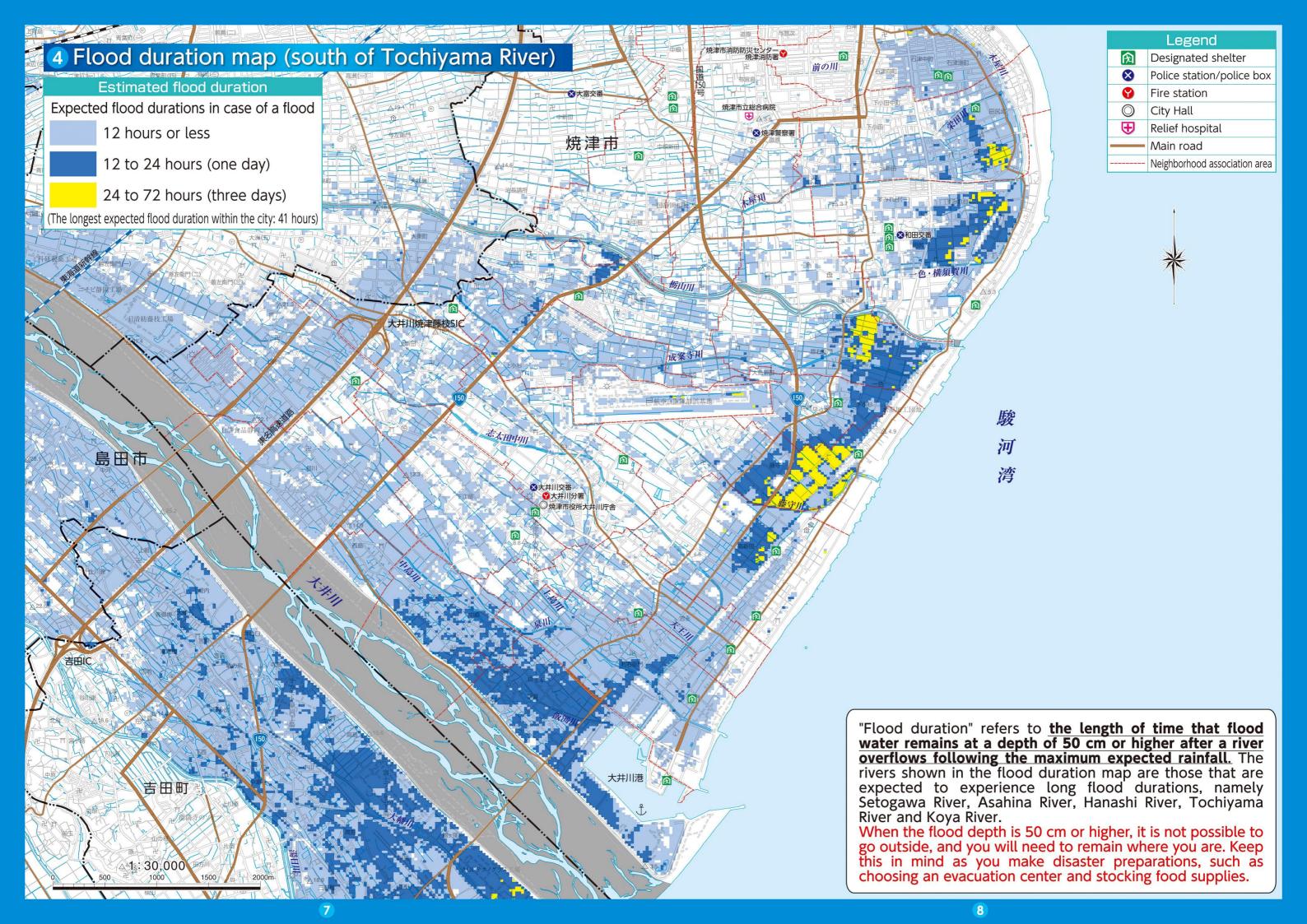
(Rivers with risk areas)

Oigawa River, Setogawa River, Asahina River, Tochiyama River, Koya River









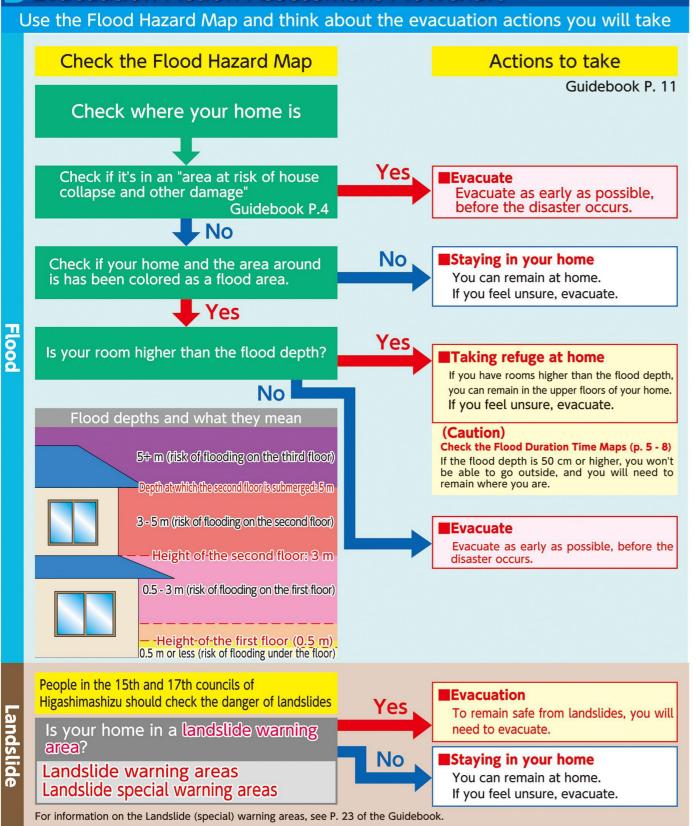
#### 5 Thinking about evacuation / evacuation action sheet 🗹

# Try this at home

- 1 Follow the Evacuation Action Assessment Flowchart while using the Flood Hazard Map
- ②Check the Evacuation Timing Assessment Flowchart (P. 10).
  Then try filling out the Household Evacuation Action Sheet (P. 10)!



#### Evacuation Action Assessment Flowchart



#### **Evacuation Timing Assessment Flowchart**

Do you or does anybody evacuating with you require extra time to evacuate? (e.g., the elderly, the disabled, infants and caregivers)



No

#### When to evacuate

When Alert Level 3 "Evacuation of the Elderly and vulnerable" has been issued, begin evacuating.

#### When to evacuate

When Alert Level 3 "Evacuation of the Elderly and vulnerable" has been issued, begin evacuating.

\*See P. 15 of the Guidebook "Alert Levels and Evacuation Actions" for more on how to get evacuation information

#### **Household Evacuation Action Sheet**

The flood depth in your home

m ~

m

Is your home in an area at risk of house collapse and other damage?

Yes

No

The flood duration at your home

hours

Is your home in a landslide (special) warning area?

(Yes)

No )

#### Actions to take (\*if unsure, evacuate)

Take refuge at home ).

**Evacuate** 

evacuation center -

#### When to evacuate

#### Alert Level 3

Start evacuating with the Evacuation of the Elderly and Vulnerable notice

#### **Alert Level 4**

Start evacuating with the General Evacuation Order

Notes

## General information on evacuating and taking refuge

## 1 Five ways to prepare in your daily life

Make it a part of your everyday life to prepare for emergencies and evacuation.

Reconfirm your evacuation center and your route to get there.







4 Consider the people who may need help to evacuate, such as elderly people living alone.

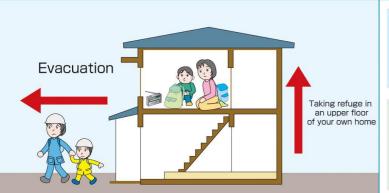




#### 2 Choosing where to evacuate to or take refuge

Depending on the situation, you should consider the best option for you, whether you evacuate to an evacuation center, the safe home of a friend of relative or a hotel, or you take refuge on the 2nd floor or higher of your own home. The important thing is to make sure you do something.

#### Evacuation vs. taking refuge in your own home



#### **Evacuation**

Evacuate to a safe place before flooding occurs.

#### Taking refuge in your own home

If you live outside areas at risk of houses collapsing and your building has floors higher than the expected flood depth, you can take refuge in the upper floors of your building.

As a basic rule, you should evacuate if you live in an "area at risk of house collapse and other damage" or a "landslide (special) warning area."

#### 3 Things to keep in mind when evacuating

#### Evacuate in groups

When evacuating, wear comfortable clothes and evacuate in groups of two or more.



#### Wear comfortable shoes

It's hard to walk in rubber boots, so wear well broken-in shoes with hard soles.



#### Watch your feet

When evacuating during floods, it can be hard to see your own feet, so take care as you walk. Be especially careful of underwater ditches and water channels.



#### Do not evacuate by car

Cars become immobile when flooded. If the flood depth exceeds 30 cm, traveling by car becomes difficult. Evacuate by foot whenever

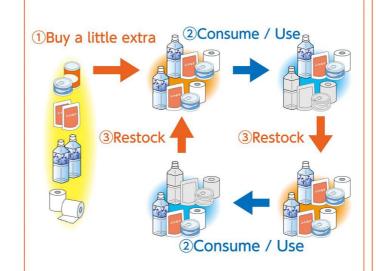
#### 4 Advance preparations

Prepare supplies of food and daily necessities in case of a disaster. Learn how and what to stockpile.

possible.

#### ■ The rolling stock method

If you use this cycle, you can store food and other necessities even if they have short shelf lives.



#### ■ Keep reserves of portable toilets

During disasters, it is very likely you will not have access to a working toilet. Prepare by keeping reserves of portable and simple toilets.

Portable Toilet



A bag-style toilet to be used together with western-style or simple toilets. They're easy to use, and can be thrown away with the garbage.



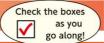
Simple Toilet

A small toilet with a seat that can be used when you have no access to normal toilets. Needs to be stored together with a portable toilet.

## **5** Advance Preparations [Checklist]



Preparations for taking refuge at home



#### Check the supplies you have at home

Assume that toilets, baths, refrigerators and other appliances will become unusable during a flood, and prepare accordingly.







#### Food supplies

$\checkmark$	Drin	king	water

- Food (cooked and packaged rice, canned food, etc.)
- Food that can be eaten uncooked (cheese, ham, etc.)
- Seasoning (salt, soy sauce, etc.)
- Snacks (chocolate, potato chips, etc.)

スプザー	スポープスポープ	みずず

3L of water per person per day

#### Daily necessities

1	Household water	$\checkmark$	Portable toilet

- Dietary supplements
- Prescription and non-prescription medications Portable toilet
- Portable stove and gas cylinder Other items you need

- Lighter
- Tissue paper
- Toilet paper
- tems you might need depending on your age and set

Flashlight

Batteries

- Moist towelettes
- Feminine hygiene products

- ✓ Latex gloves
- Plastic wrap for food
- Baby food
- You should stock **3L of water per person per day**.
- Stock at least seven days' worth of supplies.
- Store your supplies higher than the expected flood depth, e.g. on the upper floors of your home.
- Calculating how many portable toilets to prepare.
  - (5) toilet visits per day x (7) days x people in the household
    - = enough toilets for at least toilet visits

Download the checklist from the Yaizu City website.

Yaizu City Flood Hazard Map





#### **Evacuation** preparations

Check the boxes as you go along!

#### Check your emergency kit

Pack a bag with the bare minimum of things you would need in a disaster, and keep it ready.





(+charger / batteries)



Helmet

Slippers

✓ Trash bags

Work gloves



First aid kit

Portable toilets

Other items

Cash

#### **Evacuation** bag

- Rain gear Change of clothes
- Portable radio
- Knife Mobile phone
- Can opener

Drinking water

Food

Mask

Batteries Tissue paper

Necessities for preventing and treating infection

Thermometer

- Flashlight Disposable heating pads
- Writing utensils Candles
- Towels Lighter
- Prescription and non-prescription medications

Alcoholic disinfectant

Antimicrobial spray

Moist towelettes

Disposable gloves



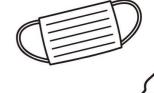
## **Valuables**

- Bank book
- Health insurance card Personal seal
- Identification documents









Keep your emergency kit within easy reach.

## How to Get Information

#### 1 Alert Levels and Evacuation Actions

There are five flood alert levels, and you should refer to them to determine when to evacuate. Make sure your entire household evacuates by the time "Alert Level 4: General Evacuation Order" has been issued.

High	n A	lert Level	Evacuation Information	Actions to Take
1	1	5	Emergency Safety Measures (issued by the city)	Life-threatening. Seek safety immediately! There is an extremely high chance that disaster has already struck. Seek safety immediately.
		Make sure	to evacuate when	e by Alert Level 4!> Alert Level 3 and Alert Level 4 are issued. wait for Alert Level 5!
Dange	information	4	General Evacuation Order (issued by the city)	Evacuate immediately.  All people in areas that are expected to be affected by the disaster should evacuate to a safe place. If there is a safe place at home, you can go home and take refuge.
er	ation	3	Evacuation of the Elderly and Vulnerable (issued by the city)	The elderly and vulnerable should evacuate immediately.  People in areas that are expected to be affected by the disaster who require additional time to evacuate (e.g., the elderly, disabled persons, infants, etc.) should begin evacuating promptly, along with their caregivers.
		2	Heavy Rain and Flood Advisories [published by JMA]	Check your evacuation plan.  Reconfirm your evacuation center and the route to get there, as well as the things you will take with you.
Low	7	1	Early Warning (published by JMA)	Mentally prepare yourself for a disaster.  Keep checking weather updates.

#### Flood and evacuation information announcements

·Having taken local conditions into consideration, the city will make evacuation information announcements on river water levels, weather forecasts, etc. •See P. 17 "Getting weather and evacuation information" for information on how to get evacuation

#### Calls to evacuate

#### If an Alert Level 4 General Evacuation Order is issued because of a flood

Alert Level 4 Begin evacuation

We have issued an Alert Level 4 General Evacuation Order in the parts of Area XX that are expected to experience flooding due to the increased risk of River XX overflowing. Evacuate immediately.

#### River water levels, upon which evacuation information announcements are based.

The national and prefectural governments have installed water level gauges in the major rivers flowing through the city, and the latest readings\*1 are available on the internet. At major observation stations, certain water levels have been established to guide evacuation decisions. The following figure shows the relationship between the water level and the evacuation information issued.

\*1: See P. 19 SIPOS Radar

Flood-fighting preparation water level	Flood alert	Evacuation	Flood risk
	water level	water level	water level
The flood-fighting corps begins preparing for flood control actions.	The flood-fighting corps commences operations.	[Alert Level 3] Evacuation orders are issued for the elderly and other vulnerable people.	[Alert Level 4] General evacuation orders are issued.

		Rivers	Oigawa River	Setogav	va River	Asahina River	Hanashi River	Tochiyama River	Koya River	Otsuya River
<del></del>	111111	Water level station	Hosojima (Shimada City)	Kachikusa Bridge (Fujieda City)	Irie Bridge	Yokouchi Bridge (Fujieda City)	Yawata Bridge (Fujieda City)	Shindo Bridge	Isshiki	Tochiyama Bridge (Shimada City)
111111111111111111111111111111111111111	/ / / / / Flood risk w	ater level	3.30	2.60	_	3.40	3.96	2.92	1.90	2.24
	Evacuation wat	ter level	2.70	2.25		2.80	3.40	2.40	1.70	2.06
levee	Flood alert v	vater level	1.70	2.00	2.70	2.50	3.00	2.10	1.50	1.79
	Flood-fighting water level	preparation	1.30	1.50	2.10	1.80	2.70	1.30	1.30	1.10
	riverbed Norr	mal water level								Units: m

#### The intensity and characteristics of rain

When the Japan Meteorological Agency (JMA) refers to "strong" or "intense" rain, this is what they mean.

Rainfall per hour (mm)	Rain intensity (forecast terminology)	How it feels	The impact on people	The scene outside
10~20	Somewhat strong rain	Raining heavily	Rain splashes up from the ground and gets your feet wet.	There are rain puddles everywhere.
20~30	Strong rain	Soaking wet	You get wet even if you use an umbrella.	
30 ~ 50	Intense rain	It feels as if buckets of water are being emptied on you		The road becomes like a river.
50 ~ 80	Very intense rain	Raining like a waterfall (roaring rain that doesn't stop)	The umbrella becomes completely useless.	The entire area becomes white due to foam, and it becomes difficult to see.
80~	Severely intense rain	There's so much pressure it's hard to breathe. You get fearful.	A Company of the Comp	

Quoted from the website of the Japan Meteorological Agency (JMA)

#### 2 Getting weather and evacuation information

When it looks like a disaster is about to occur, it is important to get the latest information. Reconfirm in advance how you will gather information.

#### Communication channels

Disaster information such as weather reports and evacuation information is disseminated by various organizations via the following routes.

#### (Media and info sites) Obtain the TV, radio nformation yourself. JMA and Weather Shizuoka Local Internet Meteorological warnings Websites Smartphone apps (Mass communication) Rainfall and **Broadcast** Shizuoka water levels **Prefecture** City website Evacuation Emergency alert e-mails If you miss the broadcasts, Yaizu City LINE account you can call \$\infty\$656-2727 to listen to the information. (Direct communication) Fire trucks, PR cars You can view data broadcasts by pressing the "d" button on your TV remote. It will show information on the amount of rainfall in the city, warnings and alerts that have been issued, and the open status of evacuation centers.

#### Get information via e-mail and LINE

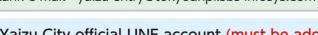
• Yaizu disaster notification e-mails (pre-registration required)

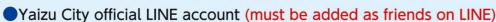
The Yaizu disaster notification e-mail service disseminates disaster information and the content of related broadcasts.

- How to register Scan the QR code at the right
  - Send a blank e-mail yaizu-entry@tokyoanpi.sbs-infosys.com









- Emergency information (disasters, disaster prevention, etc.)
- Information necessary for daily life

In addition to the emergency information that will always be sent out, you can select the types of information you want to receive.

#### Useful features in the Shizuoka Prefecture Disaster Prevention App

• Emergency notifications • Local disaster information • Disaster learning materials This app has many features that can be useful in disasters, such as notifications on various types of information and disaster prevention information that you can use in normal times. https://www.pref.shizuoka.jp/bousai/application.html





#### Get information on the internet

Information you can check on the Yaizu City website during an emergency

· Emergency information \*During typhoons, earthquakes and other disasters, emergency information will be posted on the upper part of the city website.

https://www.city.yaizu.lg.jp/

Yaizu City



- Information available from the JMA website
- Weather reports and advisories
   Tide levels
- The danger of landslides and floods occurring http://www.jma.go.jp







https://www.pref.shizuoka.jp/kensetsu/ke-350/keikai/

#### Yaizu City Flood Control Monitoring System

#### A useful website where you can see information on the city's rivers

You can follow the present status of rivers

and the coast from the live camera. External

websites providing weather information

have also been gathered.



Yaizu flood control







#### External websites

Weather information (external websites)

• Weather warnings

The movement of rain clouds (rain forecasts up to one hour in advance

Upcoming changes to the rain (rain forecasts up to 15

• GPV weather information (rain and the movement of rain clouds forecasted up to 10 days in advance)

· River disaster prevention information

SIPOS-RADAR (Shizuoka Prefecture)

River water level information





- Sediment disaster info map Sediment disaster warning information Shizuoka Sediment disaster landslide warning system
- ·Sediment disaster 110, etc.

大雨警報(浸水害)の危険度分布

・雨量予測(ピンポイント天気) ·天気予報、週間天気予報

大雨警報(土砂災害)の危険度分布

洪水浸水想定区域(想定最大) · 県GI

土砂災害ハザードマップ

土砂災害情報マップ

河川海岸監視カメラ 位置図

Flood control monitoring system screenshot

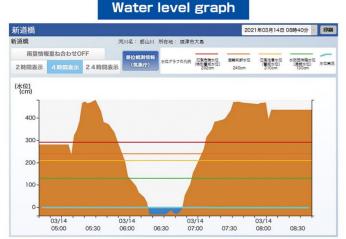
#### Shizuoka Prefecture SIPOS Radar

#### SIPOS-RADAR provides the latest information on river water levels and rainfall.

It is Shizuoka Prefecture's civil engineering comprehensive disaster prevention information site, where you can get information on disasters and the weather.



If you want to know the water level of a river or amount of rainfall at an observation station, you can click on it and get the current measurements and see any recent changes.





Rainfall graph

The main observation stations show the "flood risk water level" and "evacuation water level" that serve as markers for making evacuation decisions. (See P. 16 for details.) Pay attention to the changes in water level and use the information for your evacuation actions.

SIPOS radar





http://sipos.pref.shizuoka.jp/

11 Oigawa Higashi Elementary School

12 Oigawa Minami Elementary School

Munadaka 428

## **Advance Preparation and Knowledge**

#### 1 Evacuation centers

The city will open evacuation centers for wind and flood disasters, starting with community halls and gymnasiums of elementary and junior high schools. (Depending on the situation, school buildings may also be used.)

- •You can check the status of evacuation centers from the Yaizu disaster notification e-mails and the city
- To check the status of other evacuation facilities managed by each community (e.g., town halls), check with the local disaster prevention organizations.

Vo	Facility Name	Address	Tel	Index	Refuge floor	No	Facility Name	Address	Tel	Index	Refu floc
0	Niku Community Disaster Prevention Center	Honmachi 5-9-1	628-3359	H-5	2F	4	Wada Elementary School	Tajiri 541	624-4507	L-5	16
2	Sanku Community Disaster Prevention Center	Honmachi 2-13-18	628-5236	H-6	2F	22	Kuroishi Elementary School	Ozumi 1246	629-4855	J-3	21
3	Yonku Community Disaster Prevention Center	Yaizu 6-10-17	628-2445	H-5	2F	23	Yaizu Junior High School	Yaizu 2-10-28	628-7255	H-5	2
4	No. 5 Community Disaster Prevention Center	Ekikita 5-1-24	627-8401	F-5	2F	24	Omura Junior High School	Omura 3-25-1	628-3851	G-4	21
6	Kogawashinchi Community Disaster Prevention Center	Kogawa Shinmachi 1-11-2	627-0684	H-5	2F	25	Kogawa Junior High School	Higashi Kogawa 4-21-1	628-3777	I-5	21
6	Hamatome Community Disaster Prevention Center	Hamatome 3-1-45	627-7283	F-6	2F	26	Minato Junior High School	Tajiri Kita 584	624-6010	K-6	21
7	Araya Community Disaster Prevention Center	Honmachi 1-3-28	626-0487	G-5	1F	27	Toyoda Junior High School	Kohiji 301-2	627-1166	G-3	2
8	Ishizu Community Disaster Prevention Center	Ishizu 1233-1	623-5586	J-5	1F	28	Higashimashizu Junior High School	Nakazato 416	628-4428	E-5	2
9	Sakamoto Community Disaster Prevention Center	Sakamoto 971-5	626-0023	D-4	1F	29	Otomi Junior High School	Nakane 1-1	624-4329	K-3	1
10	Kogawa No.13 Community Disaster Prevention Center	Kogawa 3118	623-7035	I-5	2F	30	Wada Junior High School	Tajiri 1984	624-4339	L-5	11
D	Omura Community Center	Daikakuji 3-5-5	629-3351	G-3	2F	3	Yaizu Fisheries High School	Yaizu 5-5-2	628-6148	H-5	21
12	Yaizu Cultural Center	Sangamyo 1550	627-3111	H-4	1F	32	Yaizu Chuo High School *1	Kohiji 157-1	628-6000	G-2	-
13	Minato Elementary School	Ishizu Minatomachi 40-2	624-0210	K-6	2F	33	Yaizu Community Center	Honmachi 5-6-1	626-0888	H-5	31
14	Yaizu Higashi Elementary School	Sakaemachi 5-14-1	628-6348	G-5	2F	34	Kogawa Community Center	Kogawa 2724-1	624-8191	J-5	2
B	Yaizu Nishi Elementary School	Shiotsu 117-1	628-3064	H-4	2F	33	Wada Community Center	Tajiri 1992-2	623-1570	L-5	11
16	Yaizu Minami Elementary School	Yaizu 5-5-1	628-2321	H-5	2F	36	Minato Community Center	Ishizu Minatomachi 40-1	624-8855	K-6	11
17	Kogawa Elementary School	Kogawa 2525	624-3097	J-5	2F	37	Higashimashizu Community Center	Ishiwakikami 65	628-2607	E-5	21
18	Toyoda Elementary School	Gokahorinouchi 2	628-3201	H-2	2F	38	Toyoda Community Center	Koyashiki 258-1	627-7310	H-2	21
19	Higashimashizu Elementary School	Ishiwakikami 65	628-4427	E-5	2F	39	Otomi Community Center	Nakane Shinden 93-1	624-4302	K-3	11
20	Otomi Elementary School	Nakane Shinden 637	624-4316	L-3	1F						

No	Facility Name	Address	Tel	Index	Refuge floor	No	Facility Name	Address	Tel	Index	Refug floo		
0	Riemon Chiku Community Disaster Prevention Center	Riemon 2559-2	-	F-7	2F	B	Wada Junior High School	Tajiri 1984	624-4339	B-9	1F		
2	Yoshinaga Chiku Community Disaster Prevention Center	Yoshinaga 1933-1		F-8	1F	14	Oigawa Junior High School	Shimoedome 191	622-0038	E-5	2F		
3	Takashinden Chiku Community Disaster Prevention Center	Takashinden 1853-1	_	E-8	1F	Œ	Seiryukan High School	Kamishinden 292-1	622-3411	B-5	1F		
4	Takashinden Higashi Chiku Community Disaster Prevention Center	Takashinden 2172-2	-	E-8	2F	16	Ojima Gymnasium	Ojima 738	-	B-6	*2		
	Fujimori Chiku Community Disaster Prevention Center	Fujimori 2025	-	D-9	1F	D	Wada Community Center	Tajiri 1992-2	623-1570	B-9	1F		
6	Shimokosugi Chiku Community Disaster Prevention Center	Shimokosugi 537	-	C-9	2F	18	Oigawa Community Center	Munadaka 900	622-3111	D-6	2F		
7	Oigawako Community Disaster Prevention Center	Habuchi 2160	622-1337	G-7	3F	ø	Discovery Park Yaizu	Tajiri 2968-1	625-0800	B-10	1F		
8	Otomi Elementary School	Nakane Shinden 637	624-4316	A-7	1F		IID ( ( II ( II II		and the second		202 2012		
9	Wada Elementary School	Tajiri 541	624-4507	A-9	1F		<ul> <li>"Refuge floor" refers to the floor of a building that is higher than t expected flood depth.</li> </ul>						
10	Oigawa Nishi Elementary School	Kamiizumi 1688-1	622-0049	C-4	1F	<ul> <li>Some of the facilities are shown in both the northern and southern par of the Flood Hazard Map. The numbers of those facilities differ on the</li> </ul>							

- of the Flood Hazard Map. The numbers of those facilities differ on the northern and southern parts.
- \*1: An emergency center to be used by people who cannot return home
- \*2: Depending on the flooding situation, it might not be possible to use this facility.

622-0010 D-6 2F

622-0104 E-7 2F

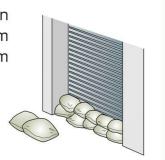
#### 2 Flood prevention measures you can take at home

#### Simple flood prevention methods

You can implement your own flood prevention methods at home by using sandbags, watertight sheets and simple waterbags.

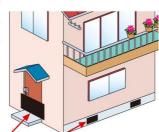
#### Sandbags

Prepare sandbags in advance and use them to stop floodwater from coming in.



#### Watertight sheets

You can seal doorways and ventilation openings with watertight sheets to stop floodwater from coming in.



Watertight sheets

#### Simple waterbags

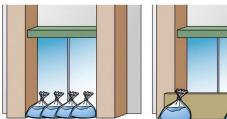
#### ■How to make simple waterbags

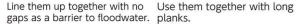
Take two 45-L trash bags and double-bag them. Fill the inner bag around halfway with water, and tie both the inner and outer bags with string. (Make sure you can still carry them.)





#### ■How to use simple waterbags







They're easier to carry if you put them in cardboard boxes.



Use them to block drains and prevent sewage water from coming back up.

#### Sandbag stations

Yaizu City has prepared sandbag stations, where sandbags are stored ready-to-use in case of typhoons and heavy rains. You can find the sandbag stations on the Flood Hazard Map and Yaizu City Flood Control Monitoring System (see P. 18).

#### Notes of caution

- · Each household can take up to 20 sandbags.
- The sandbags may only be taken for flood control purposes.
- After use, do not return the sandbags. Keep and store them at your own household.
- If there is a shortage of sandbags, please contact the city Rivers Division.



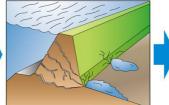
## 3 How flooding happens

#### The mechanism of external water inundation (flooding)

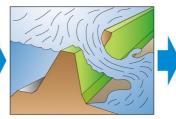
When a river overflows or collapses its embankments due to heavy rains, the water flows out with great force. This is called "external water inundation."



The amount of water increases due to heavy rain, and the water volume starts to rise.



If the water fills up all the way to the top of the embankment, the water pressure places stress on the embankment.



If the water increases and the embankment becomes unable to withstand the pressure, parts of the embankment begin to collapse.



The collapsed parts expand suddenly, and water flows out with great force.

#### The mechanism of inland water inundation

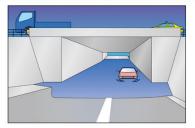
When the water level of a river rises due to heavy rainfall, it becomes impossible to drain the rainwater that has fallen in urban areas into rivers, resulting in the overflow of water. This is called "inland water inundation."



Rain that falls in urban areas is drained into rivers via water channels.

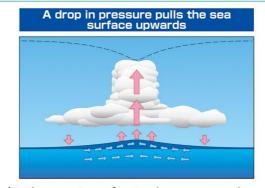


During heavy rains, the water level in the rivers rises, and draining the rainwater becomes difficult, causing the water channels to overflow.



Rainwater collects in areas where the roads are low, such as underneath road and rail overpasses, inundating them.

#### The mechanism of storm surges



At the center of a typhoon or cyclone, the air pressure is lower than that of the surrounding area, so the air near the center pulls up the sea level, causing it to rise.

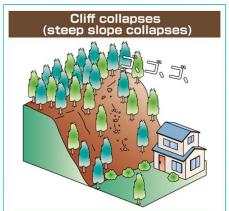
# Wind-driven surges

When the strong typhoon winds blow from offshore toward the coast, the sea level near the coast rises. The shallower the water, the stronger the effect, and the likelier it is for a storm surge to develop.

#### 4 Basic knowledge of landslides

#### Types of landslides

Landslides are natural disasters triggered by heavy rains or earthquakes that cause mountains and cliffs to collapse. Soil and stones mixed with water can also flow from rivers, causing damage to houses and fields. The main types of disasters are cliff collapses (steep slope collapse), mudslides, and landslides.



The collapse of steep slopes.



- •Cracks in the cliff become visible.
- •Water starts gushing forth from the cliff.
- Pebbles start to fall from the cliff.

#### Mudslides

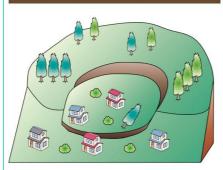


Soil and stones from the mountain mix with water and come rushing down at great speed.



- The mountain rumbles.
- •Rivers suddenly become murky, and driftwood comes down.
- ●The river's water level goes down, even if it keeps on raining.

#### Landslides



A surface with a relatively gentle slope slides down all at once over a large area.



- ●The water in mountain streams and wells becomes murky.
- •Cracks appear in the ground.
- ■Water sprays out from the slope.

# Landslide warning areas

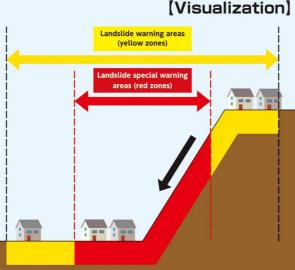
There are two types of areas where you should be watchful of landslides: "landslide warning areas" and "landslide special warning areas."

#### Landslide warning areas (yellow zones)

Areas at risk of receiving damage from collapsing soil and sand. (Shown in yellow borders on the map.)

#### Landslide special warning areas (red zones)

Areas where there is a risk that collapsing soil and sand can cause damage to buildings and considerable harm to life and limb of residents. (Shown in red borders on the map.)



Search

You can also check the landslide (special) warning areas on the Yaizu City Landslide Hazard Map.

Yaizu City Landslide Hazard Map



#### **5** Flood navigator

#### Try simulating a flood

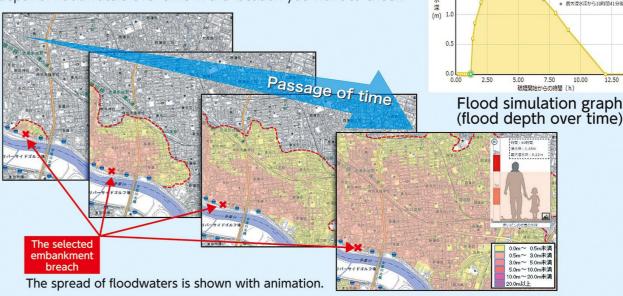
~Things you can learn from the flood navigator~

You can check detailed information about expected flooding.

Available for: Oigawa River, Setogawa River, Asahina River, Hanashi River, Tochiyama River, Koya River

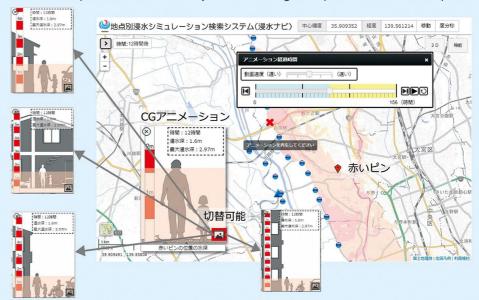
#### •You can see how the extent and depth of flooding change when a flood happens

By choosing the expected location of an embankment breach, you can see how the floodwaters would spread. The graph shows the depth of floodwaters over time in the location you want to check.



#### •CG animation shows you how deep the floodwaters could become

By switching between backgrounds with different scales (five legends), you can use CG animation to see the changes in flood depth of a location of your choosing (the point with the red pin).



You an also check when the flood will begin and for how long it will last on the map.

Flood navigator website

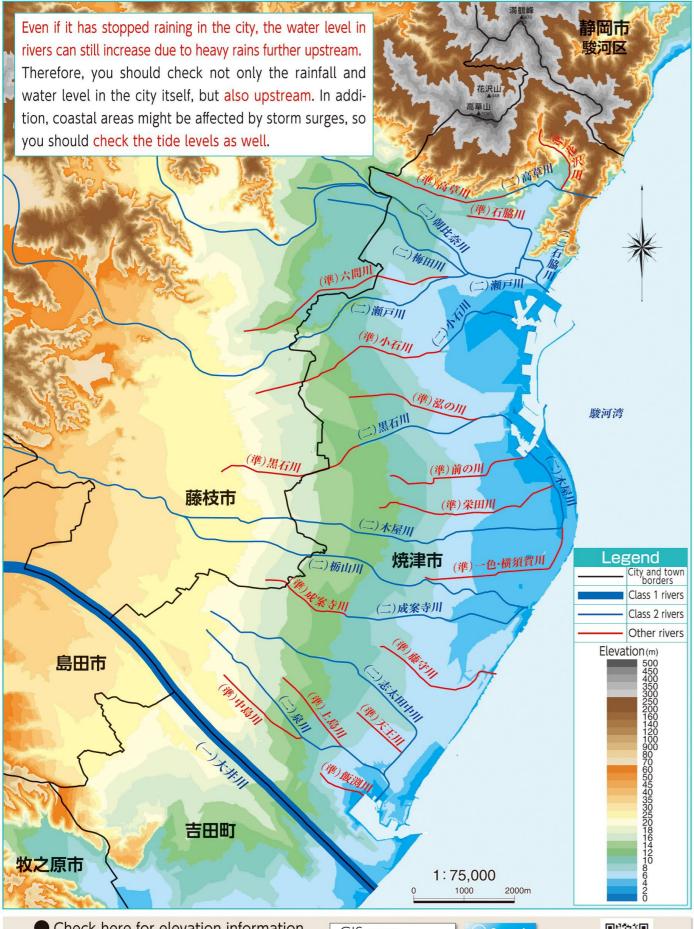
Flood navigator

Search \

Address: https://suiboumap.gsi.go.jp/ Compatible with mobile devices



#### 6 The rivers that flow through the city and their elevations



Check here for elevation information
 GIS map (electronic national map on the web)
 (PC and mobile device compatible)

GIS map







## 5

## Create your own household evacuation plan

#### What is an evacuation plan?

An evacuation plan is an action plan that you put together in advance to determine "when to do what" and "when to begin evacuating," based on the evacuation information issued by JMA and the city government. Floods are progressive disasters in which the situation changes from moment to moment based on weather conditions.

In order to protect valuable human life, it is important to make a plan in advance and prepare for disaster, instead of waiting for the disaster to start before taking any action.

#### Follow the steps below to create your plan.

#### STEP1. Check the flood predictions in your area. Guidebook P.9 - 10

- Open the Yaizu City Flood Hazard Map (separate)
- Follow the Evacuation Action Assessment Flowchart (P. 9) and Evacuation Timing Assessment Flowchart (P. 10) to make your Household Evacuation Action Sheet (P. 10).

#### STEP2. Check the Alert Level and your evacuation actions Guidebook P.15 - 19

- Reconfirm the evacuation information and actions to take (P. 15)
- ➤ "Alert Level 3 Evacuation of the Elderly and Vulnerable" and
  "Alert Level 4 General Evacuation Order" Important Evacuation Information
- Reconfirm how to get weather and evacuation information (P. 17)
- ➤ The "d" button on your TV, radio, internet, broadcasts, Yaizu disaster notification e-mails, the city's official LINE account etc.

#### STEP3. Create your evacuation action plan

Guidebook P.28

●Use the sample plan on P. 27 as a reference to create your own evacuation action plan.

#### Consider evacuation or refuge sites appropriate to your situation.

As a basic rule, people who are in areas expected to experience disaster should evacuate, but there's no need for people in safe areas to also go to evacuation centers. If you're in a safe area, you can take refuge in your own home, the home of a friend or relative, or even a hotel.





HOTEL

Own home

Home of friend or relative

Hotel

#### Local cooperation

- •In times of disaster and during evacuation, the everyday connections you make with people in your neighborhood show their strength.
- Ensuring your own safety is important, but having done so, it is also important for people in the community to help each other.
- •It is important to get together with local disaster prevention organizations and people in your neighborhood to think about the disaster-related challenges and countermeasures in your community so that you will be able to respond appropriately when the time comes.
- •When disaster strikes, the people in your neighborhood will be the ones you can rely on. In order to reduce damage from disaster, it is important to maintain connections to your community.

#### Our Household Evacuation Action Plan

#### Sample Plan

~When evacuating at Alert Level 4-

Yaizu Version Family XX's Household Evacuation Action Plan

Information from JMA and the city government (weather and evacuation information)

#### Several days Alert Level 1 in advance

- Typhoon forecast
- Early warnings



**Typhoon** approaching

Rain gets

more intense

River water levels

gradually rise

River water

levels rise

even further

## **Alert Level 2**

- Heavy rain alert
- Flood alert
- Storm surge alert



- Heavy rain warning
- Flood warning

The water level at XX River has reached evacuation levels

#### Alert Level 3 Evacuation notice for the elderly and vulnerable issued



People who require additional time to evacuate (e.g., the elderly, disabled persons, infants, etc.) should begin evacuating promptly, along with their caregivers (e.g., family members).

The water level at XX River has reached flood risk levels

#### Alert Level 4

General evacuation order issued.

All people in areas that are expected to be affected by the disaster should evacuate to a safe place. (Evacuation complete.)

- Situation where a disaster has already occurred or is imminent

#### Alert Level 5 **Emergency Safety Measures**

\*Will not necessarily be issued. Do not wait for Alert Level 5 to be issued!

#### Check the upcoming weather information by

pressing the "d" button on your TV remote

Your actions (input column)

- · Check your family's upcoming plans
- · Check your hazard map
- Check your Household Evacuation Action Plan

#### · Check your emergency kit

- · Check how much you have left of the medications you're taking
- · Tidy up around your home
- Check where you will evacuate or take refuge
- · Check the weather information by pressing the "d" button on your TV remote
- · Check the water level of River XX on the internet
- Change into comfortable clothes
- Check the weather information
- Begin evacuating to

- Check the weather information
- Check the water level of River XX on the internet
- · Check whether the evacuation site is open

evacuation site

evacuation site

Begin evacuating to Community Center XX

\*Everyone has fully evacuated by this point.

## Life-saving actions

• If you have determined that the route to the evacuation center is dangerous, move to higher ground to save your life.

This evacuation action plan is intended as a guide to show the basic flow of how to respond to wind and flood disasters. Please note that evacuation information will not necessarily be issued in this sequence. ou can download the forms from the Yaizu City website. You can find additional sample plans there as well

Yaizu City Flood Hazard Map





Yaizu Version Family

's Household Evacuation Action Plan



Your actions (input column)

Information from JMA and the city government (weather and evacuation information)

#### Several days Alert Level 1

- Typhoon forecast
- Early warnings



**Typhoon** approaching

Rain gets

more intense

River water levels

gradually rise

in advance

#### **Alert Level 2**

- Heavy rain alert
- Flood alert



- Heavy rain warning
- Flood warning

River water levels rise even further The water level at XX River has reached evacuation levels

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time to evacuate (e.g., the elderly, disabled persons, infants, etc.) should begin evacuating promptly, along with their caregivers (e.g., family members).

· The water level at XX River has reached flood risk levels

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#### Alert Level 5 **Emergency Safety Measures**

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- evacuation site Begin evacuating to

evacuation site

Begin evacuating to

\*Everyone has fully evacuated by this point.

- Situation where a disaster has already occurred or is imminent

## Life-saving actions

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