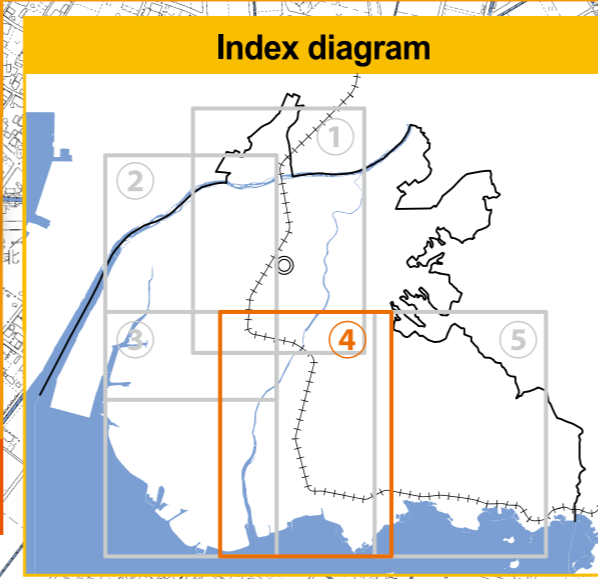


# Internal Inundation Hazard Map

## ④ Kira District

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### Basic conditions of the expected internal inundation (analysis conditions)

- ◆ The areas covered by the analysis are sewage planning zones (primarily urban areas and areas that flow into urban areas).
- ◆ The flood waters were modeled using the amount of rain that might fall only once in a thousand years (expected maximum rainfall). This is the amount of rain equivalent to up to 147 mm per hour (up to 31 mm per 10 minutes).
- \* Rainfall is set based on the Method for Setting Expected Maximum External Force for Creating Flood Predictions (Floods, Internal Inundations) (Ministry of Land, Infrastructure, Transport and Tourism, July 2015).
- ◆ Flooding (external inundation) of Class 1 Rivers and Class 2 Rivers is not considered.
- ◆ Expected floods may not reflect actual events.
- ◆ Even if an area does not have a color assigned to it, it may flood.

### About this Map

Flood damage can be broadly separated into two types depending on the cause. The first is called external inundation (flooding), which is flood damage caused by river water such as when a levee fails. The other is called internal inundation, which is flood damage caused by the overflow of waterways as in the case of rain in excess of the drainage capacity of the waterway that flows into a river or when the river that would receive the drainage is full preventing outflow resulting in an overflow. This map gives the expected flood damage from the latter type, internal inundation. Modeling around the maximum level rainfall that can be expected (about once per millennium level), the map shows a computer analysis of areas (zones) where flooding is likely and the depth of the floodwaters.

#### Overview of External Inundation (Flooding)



External inundation is flooding that occurs from river water overflowing from a levee or a levee failure due to a typhoon or heavy rains.

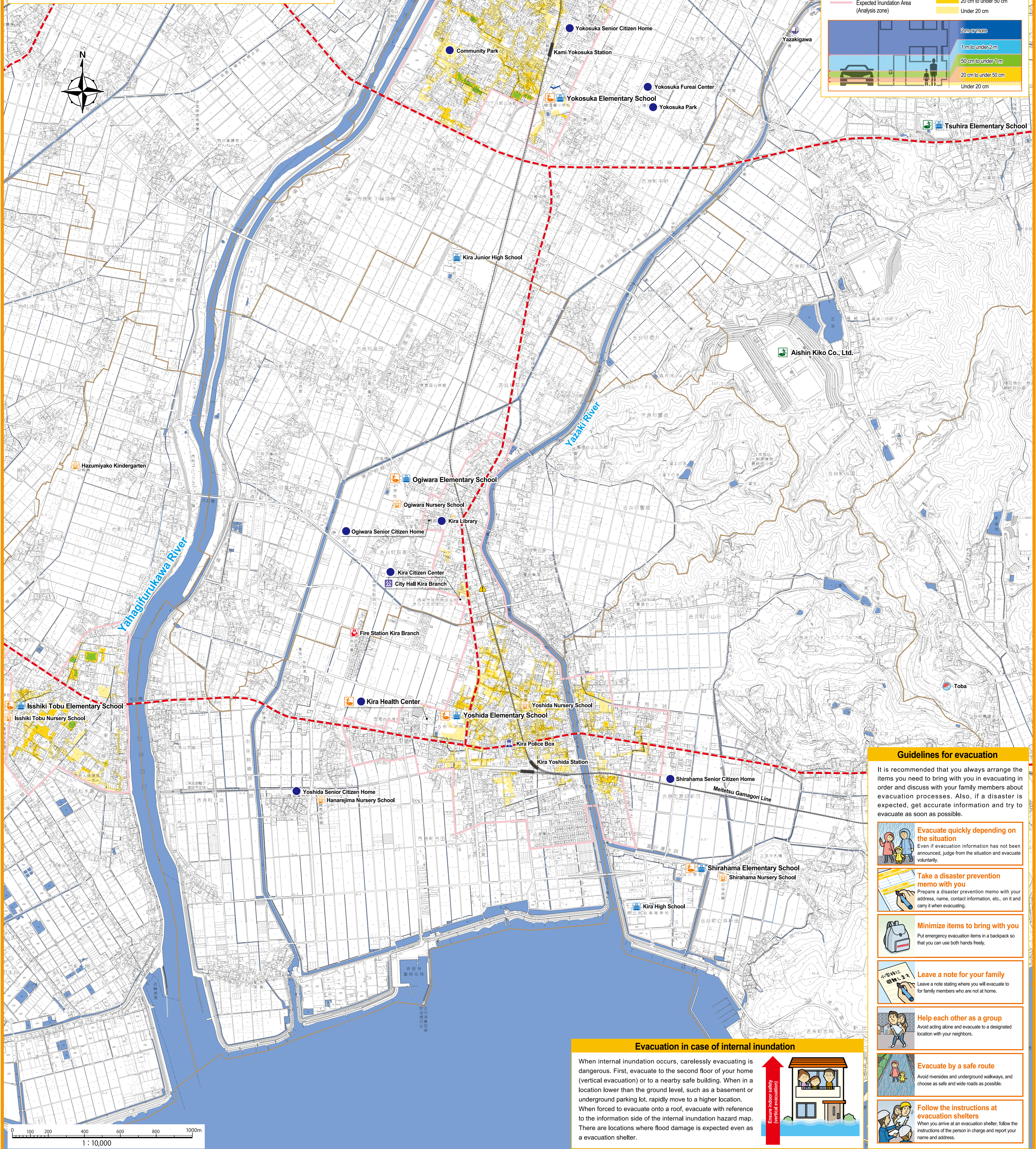
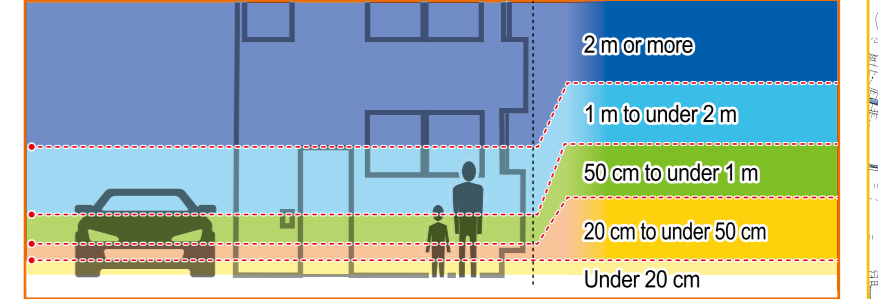
#### Overview of Internal Inundation (this map)



This flooding occurs when water overflows from urban areas when rainfall in urban areas exceeds the drainage capacity of waterways or sewage pipes or when heavy rains prevent drainage into rivers with a high water level.

### Legend

- |  |   |
|--|---|
| <p><b>Designated Emergency Evacuation Shelter (Designated Evacuation Shelter)</b><br/>Can be used in the event of a flood</p> <p><b>Limited in the event of a flood</b><br/>(There is a possibility of flooding in the event of a large-scale flood)</p> <p><b>School</b></p> <p><b>City Hall / Branch</b></p> <p><b>Police Station / Police Box / Residential Police Box</b></p> <p><b>Fire Station</b></p> <p><b>Emergency Hospital</b></p> <p><b>Kindergarten / Nursery School</b></p> <p><b>City Boundary</b></p> <p><b>Railway</b></p> <p><b>Emergency Transport Route</b></p> <p><b>Elementary School District Boundary</b></p> <p><b>Expected Inundation Area (Analysis zone)</b></p> | <p><b>Inundation record</b><br/>Area with a track record of flooding since 1989</p> <p><b>Other Facilities</b></p> <p><b>Precipitation Measurement Site</b></p> <p><b>Water Level Measurement Site</b></p> <p><b>Underpass</b></p> <p><b>Expected maximum flood depth</b></p> <p>2 m or more</p> <p>1 m to under 2 m</p> <p>50 cm to under 1 m</p> <p>20 cm to under 50 cm</p> <p>Under 20 cm</p> |
|--|---|



### Guidelines for evacuation

It is recommended that you always arrange the items you need to bring with you in evacuating in order and discuss with your family members about evacuation processes. Also, if a disaster is expected, get accurate information and try to evacuate as soon as possible.

- Evacuate quickly depending on the situation**  
Even if evacuation information has not been announced, judge from the situation and evacuate voluntarily.
- Take a disaster prevention memo with you**  
Prepare a disaster prevention memo with your address, name, contact information, etc., on it and carry it when evacuating.
- Minimize items to bring with you**  
Put emergency evacuation items in a backpack so that you can use both hands freely.
- Leave a note for your family**  
Leave a note stating where you will evacuate to for family members who are not at home.
- Help each other as a group**  
Avoid acting alone and evacuate to a designated location with your neighbors.
- Evacuate by a safe route**  
Avoid riversides and underground walkways, and choose as safe and wide roads as possible.
- Follow the instructions at evacuation shelters**  
When you arrive at an evacuation shelter, follow the instructions of the person in charge and report your name and address.

### Evacuation in case of internal inundation

When internal inundation occurs, carelessly evacuating is dangerous. First, evacuate to the second floor of your home (vertical evacuation) or to a nearby safe building. When in a location lower than the ground level, such as a basement or underground parking lot, rapidly move to a higher location. When forced to evacuate onto a roof, evacuate with reference to the information side of the internal inundation hazard map. There are locations where flood damage is expected even as an evacuation shelter.

