

Legend

- Designated emergency evacuation site
- Designated evacuation shelter
- City Hall
- Fire Station
- Police Station
- Rain gauge station
- Water level station
- Heliport
- Underpass
- Expressway
- National road
- Prefectural road
- Railway (JR)

Sediment Disaster Hazard Area

	Special Hazard Area	Hazard Area
Slope failure		
Debris flow		
Landslide		

Assumed Inundation Area

Approximate flood depth	
	10.0 m~below 20.0 m
	5.0 m~below 10.0 m
	3.0 m~below 5.0 m
	0.5 m~below 3.0 m
	Below 0.5 m
	Flooded up to the 3rd floor or above
	Flooded up to the 2nd floor
	Flooded above floor level
	Flooded below floor level

The actual flooded area due to Typhoon Tokage (Typhoon 23) in 2004

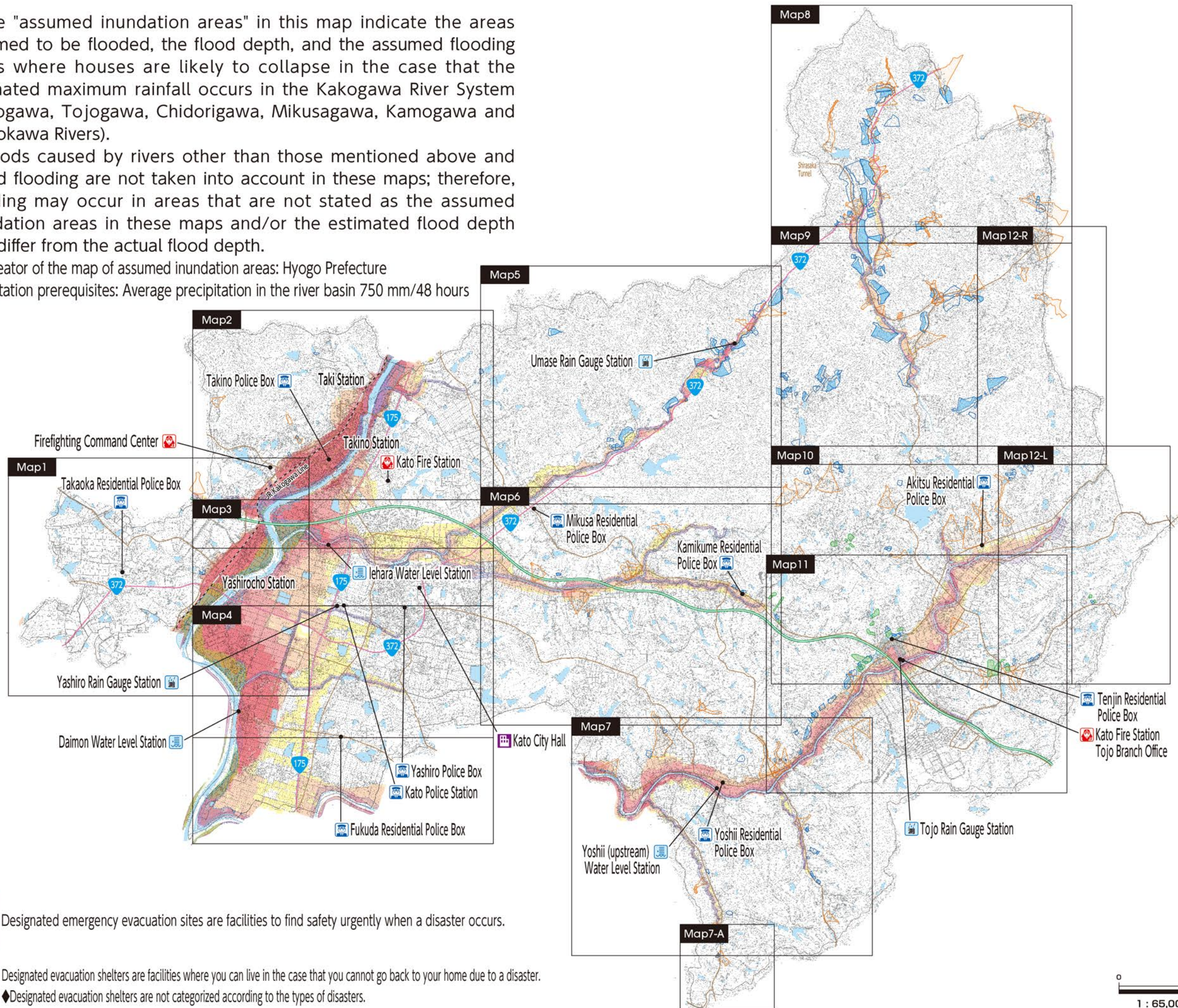
The assumed flooding area where houses are likely to collapse (The area where early evacuation is necessary)

River bank erosion Flood flow

The "assumed inundation areas" in this map indicate the areas assumed to be flooded, the flood depth, and the assumed flooding areas where houses are likely to collapse in the case that the estimated maximum rainfall occurs in the Kakogawa River System (Kakogawa, Tojogawa, Chidorigawa, Mikusagawa, Kamogawa and Shimokawa Rivers).

Floods caused by rivers other than those mentioned above and inland flooding are not taken into account in these maps; therefore, flooding may occur in areas that are not stated as the assumed inundation areas in these maps and/or the estimated flood depth may differ from the actual flood depth.

The creator of the map of assumed inundation areas: Hyogo Prefecture
Precipitation prerequisites: Average precipitation in the river basin 750 mm/48 hours



Designated emergency evacuation sites are facilities to find safety urgently when a disaster occurs.



Designated evacuation shelters are facilities where you can live in the case that you cannot go back to your home due to a disaster.
◆ Designated evacuation shelters are not categorized according to the types of disasters.

0 1,500m
1 : 65,000

You can estimate approximate distance and walking time on these maps, using a one-yen coin and ten-yen coin.

Measuring a distance on the map



300 meters on the map

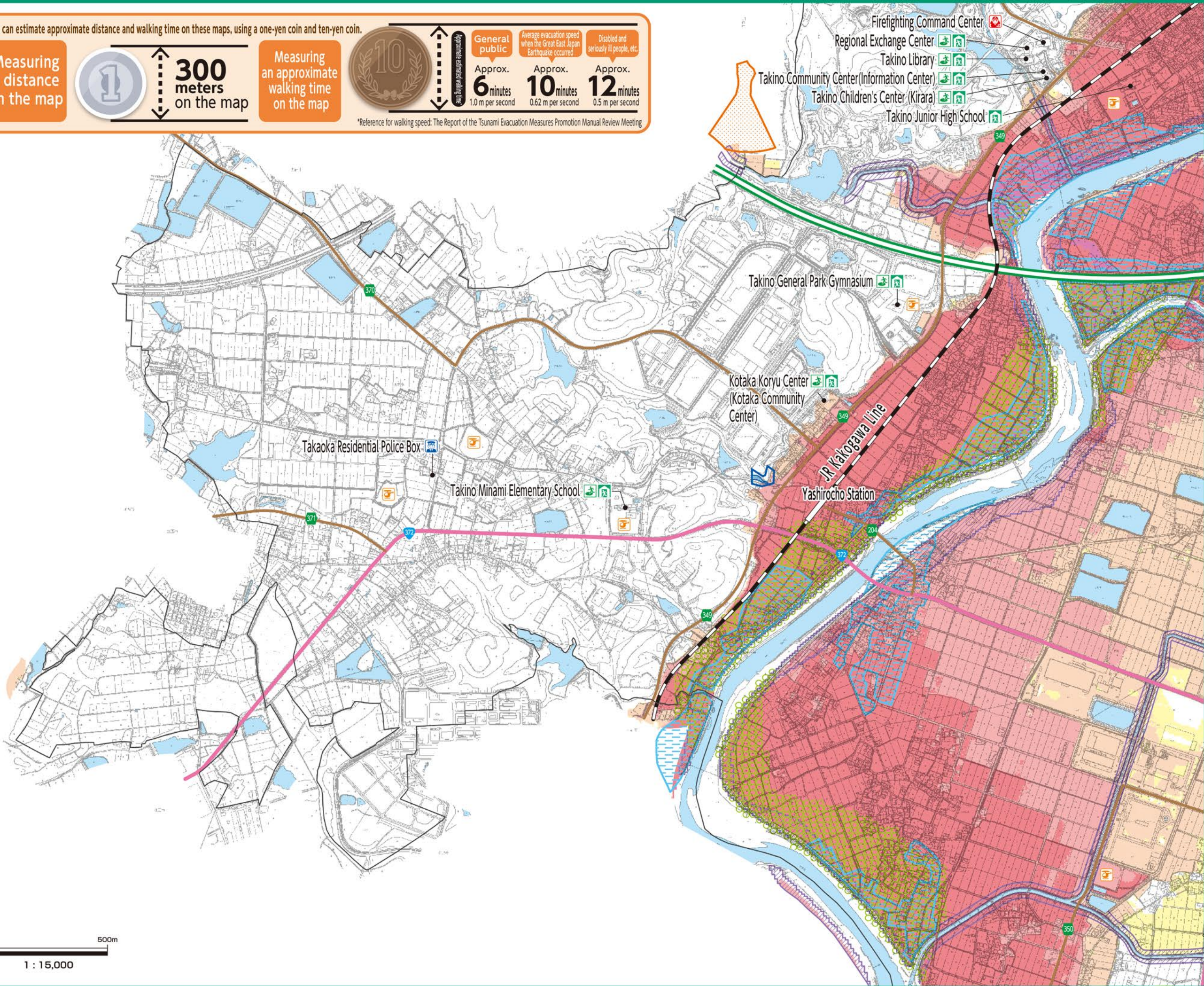
Measuring an approximate walking time on the map



Approximate estimated walking time

General public	Average evacuation speed when the Great East Japan Earthquake occurred	Disabled and seriously ill people, etc.
Approx. 6 minutes 1.0 m per second	Approx. 10 minutes 0.62 m per second	Approx. 12 minutes 0.5 m per second

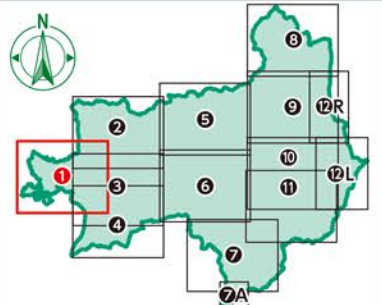
*Reference for walking speed: The Report of the Tsunami Evacuation Measures Promotion Manual Review Meeting



0 500m
1 : 15,000

Hazard Map

Map 1



Legend

- Designated emergency evacuation site
- Designated evacuation shelter
- Welfare Shelter
- City Hall
- Fire Station
- Police Station
- Rain gauge station
- Water level station
- Helipoint
- Underpass
- Expressway
- National road
- Prefectural road
- Railway (JR)

Sediment Disaster Hazard Area

	Special Hazard Area	Hazard Area
Slope failure	[Blue box]	[White box]
Debris flow	[Orange box]	[Orange box with dots]
Landslide		[Green box with vertical lines]

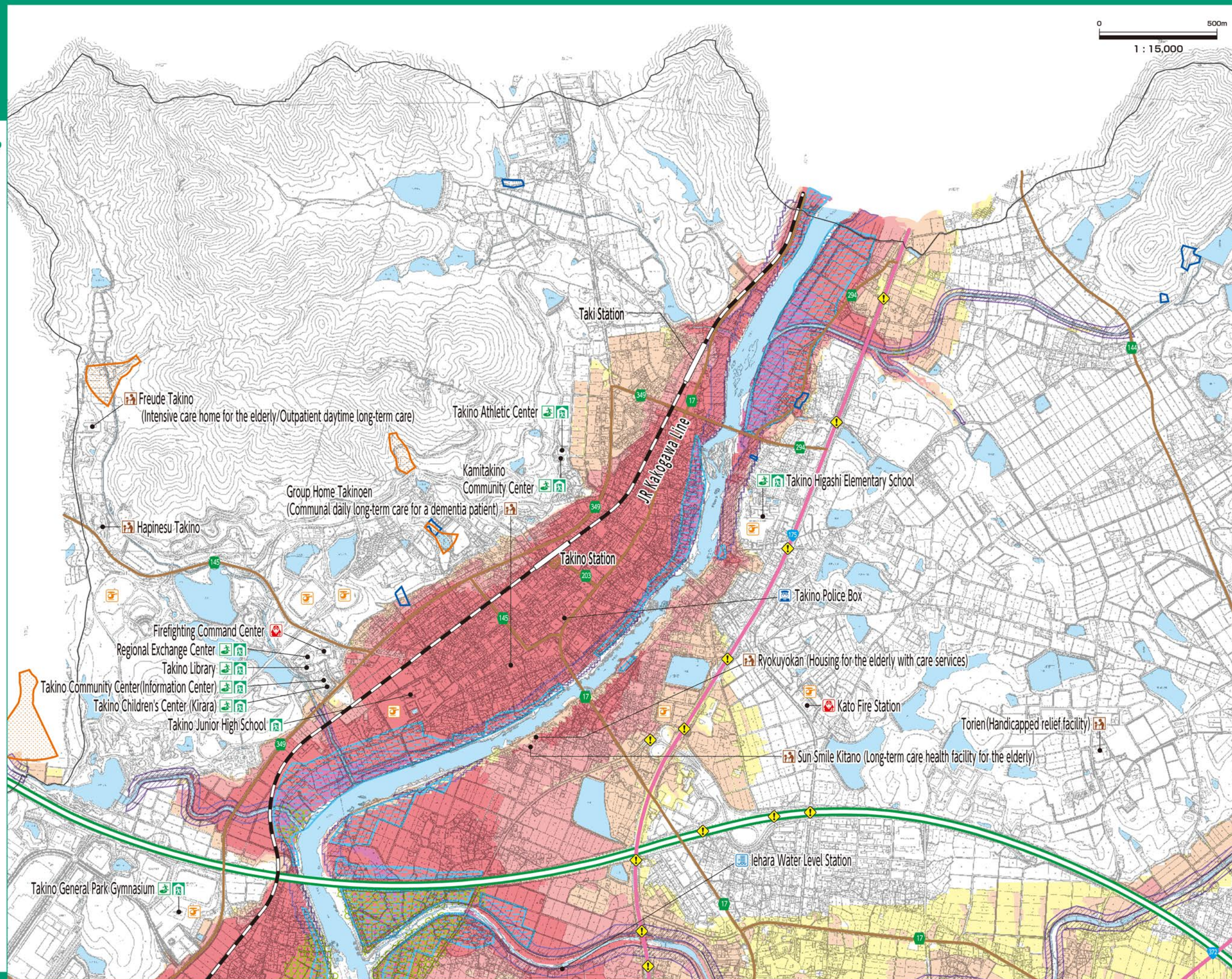
Assumed Inundation Area

Approximate flood depth	
10.0 m~below 20.0 m	
5.0 m~below 10.0 m	Flooded up to the 3rd floor or above
3.0 m~below 5.0 m	Flooded up to the 2nd floor
0.5 m~below 3.0 m	Flooded above floor level
Below 0.5 m	Flooded below floor level

The actual flooded area due to Typhoon Tokage (Typhoon 23) in 2004

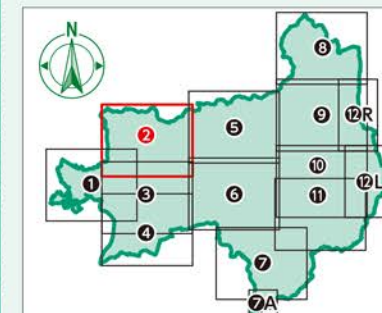
The assumed flooding area where houses are likely to collapse (The area where early evacuation is necessary)

- River bank erosion
- Flood flow



Hazard Map

Map2



Legend

- Designated emergency evacuation site
- Designated evacuation shelter
- Welfare Shelter
- City Hall
- Fire Station
- Police Station
- Rain gauge station
- Water level station
- Heliport
- Underpass
- Expressway
- National road
- Prefectural road
- Railway (JR)

Sediment Disaster Hazard Area

- Special Hazard Area
- Hazard Area
- Slope failure
- Debris flow
- Landslide

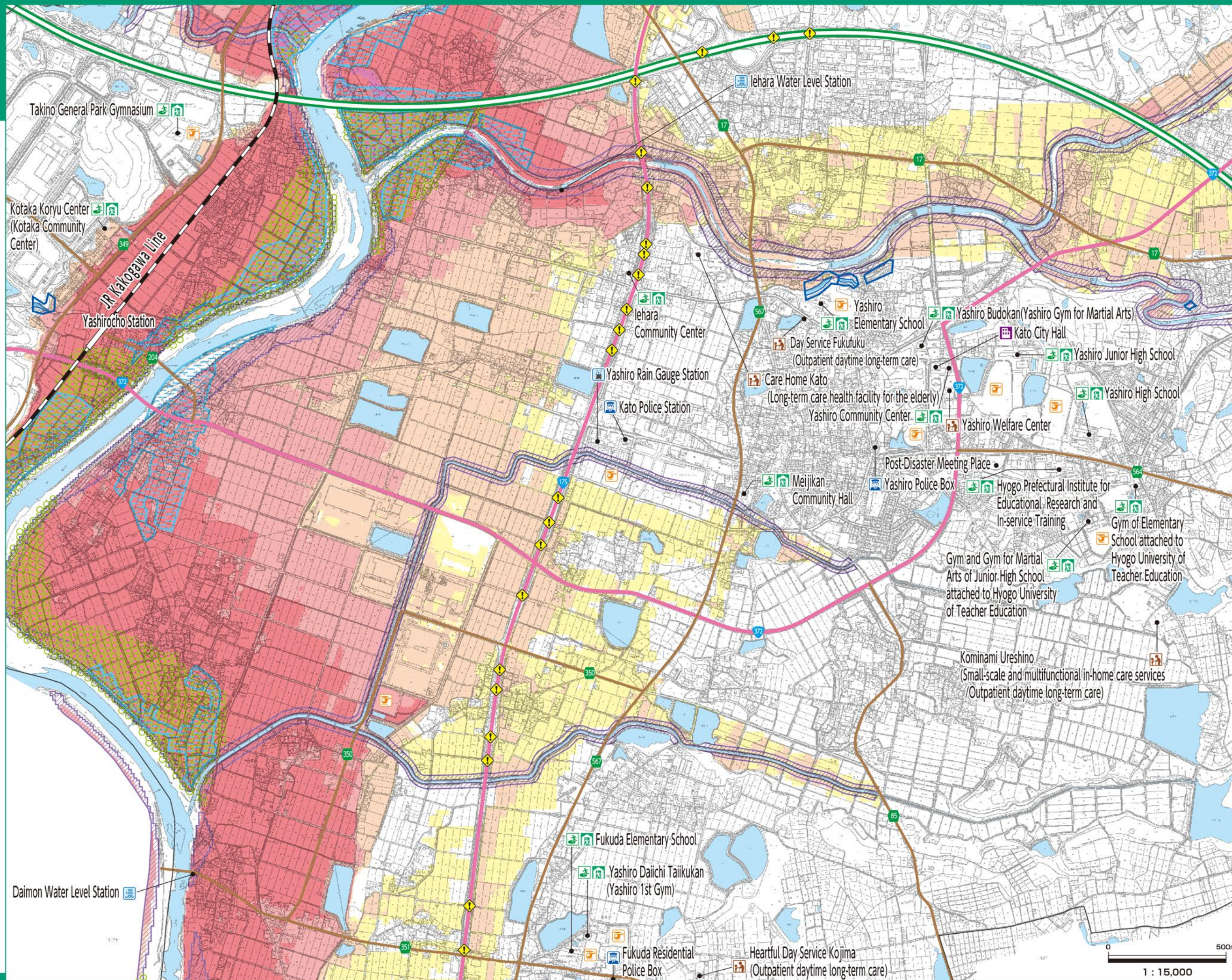
Assumed Inundation Area

- Approximate flood depth**
- 10.0 m~below 20.0 m
 - 5.0 m~below 10.0 m
 - 3.0 m~below 5.0 m
 - 0.5 m~below 3.0 m
 - Below 0.5 m
- Flooded up to the 3rd floor or above**
- Flooded up to the 2nd floor**
- Flooded above floor level**
- Flooded below floor level**

The actual flooded area due to Typhoon Tokage (Typhoon 23) in 2004

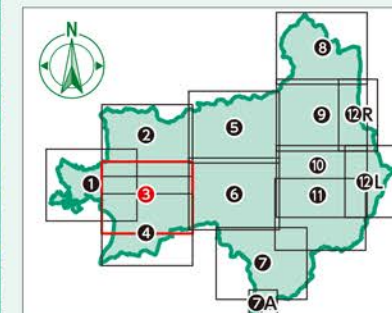
The assumed flooding area where houses are likely to collapse (The area where early evacuation is necessary)

- River bank erosion
- Flood flow



Hazard Map

Map3



Legend

- Designated emergency evacuation site
- Designated evacuation shelter
- Welfare Shelter
- City Hall
- Fire Station
- Police Station
- Rain gauge station
- Water level station
- Heliport
- Underpass
- Expressway
- National road
- Prefectural road
- Railway (JR)

Sediment Disaster Hazard Area

	Special Hazard Area	Hazard Area
Slope failure		
Debris flow		
Landslide		

Assumed Inundation Area

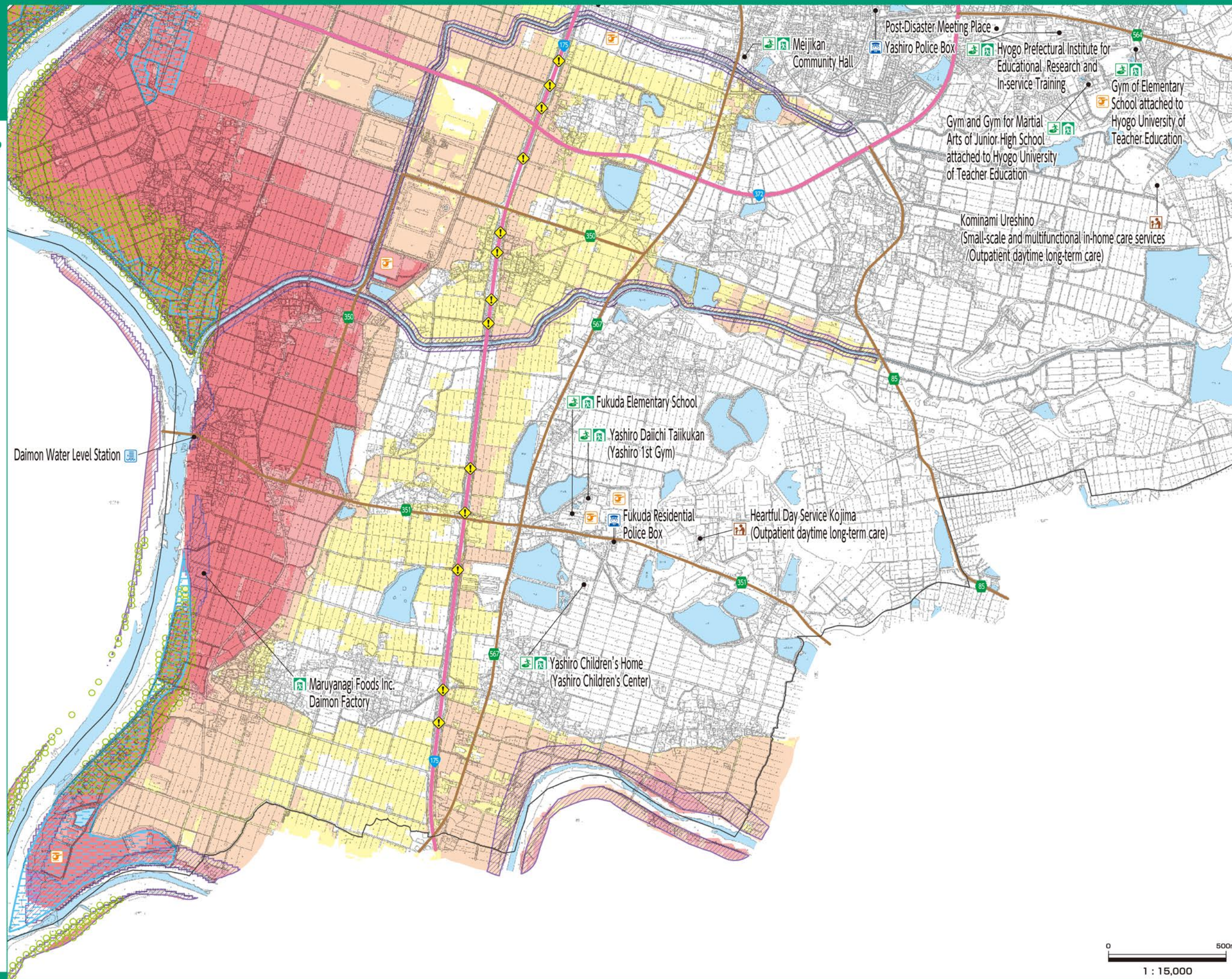
Approximate flood depth	
10.0 m~below 20.0 m	
5.0 m~below 10.0 m	Flooded up to the 3rd floor or above
3.0 m~below 5.0 m	Flooded up to the 2nd floor
0.5 m~below 3.0 m	Flooded above floor level
Below 0.5 m	Flooded below floor level

The actual flooded area due to Typhoon Tokage (Typhoon 23) in 2004

The assumed flooding area where houses are likely to collapse (The area where early evacuation is necessary)

- River bank erosion
- Flood flow

1 : 15,000



Hazard Map

Map4



Legend

- Designated emergency evacuation site
- Designated evacuation shelter
- Welfare Shelter
- City Hall
- Fire Station
- Police Station
- Rain gauge station
- Water level station
- Heliport
- Underpass
- Expressway
- National road
- Prefectural road
- Railway (JR)

Sediment Disaster Hazard Area

	Special Hazard Area	Hazard Area
Slope failure		
Debris flow		
Landslide		

Assumed Inundation Area

Approximate flood depth	
10.0 m~below 20.0 m	
5.0 m~below 10.0 m	Flooded up to the 3rd floor or above
3.0 m~below 5.0 m	Flooded up to the 2nd floor
0.5 m~below 3.0 m	Flooded above floor level
Below 0.5 m	Flooded below floor level

The actual flooded area due to Typhoon Tokage (Typhoon 23) in 2004

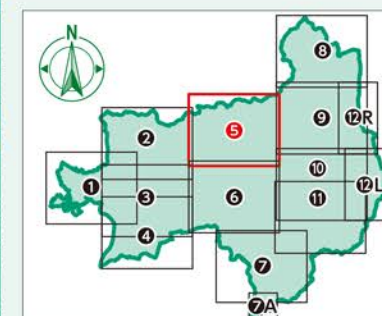
The assumed flooding area where houses are likely to collapse
(The area where early evacuation is necessary)

River bank erosion Flood flow

0 500m
1 : 15,000

Hazard Map

Map5



Legend

- Designated emergency evacuation site
- Designated evacuation shelter
- Welfare Shelter
- City Hall
- Fire Station
- Police Station
- Rain gauge station
- Water level station
- Helipoint
- Underpass
- Expressway
- National road
- Prefectural road
- Railway (JR)

Sediment Disaster Hazard Area

	Special Hazard Area	Hazard Area
Slope failure		
Debris flow		
Landslide		

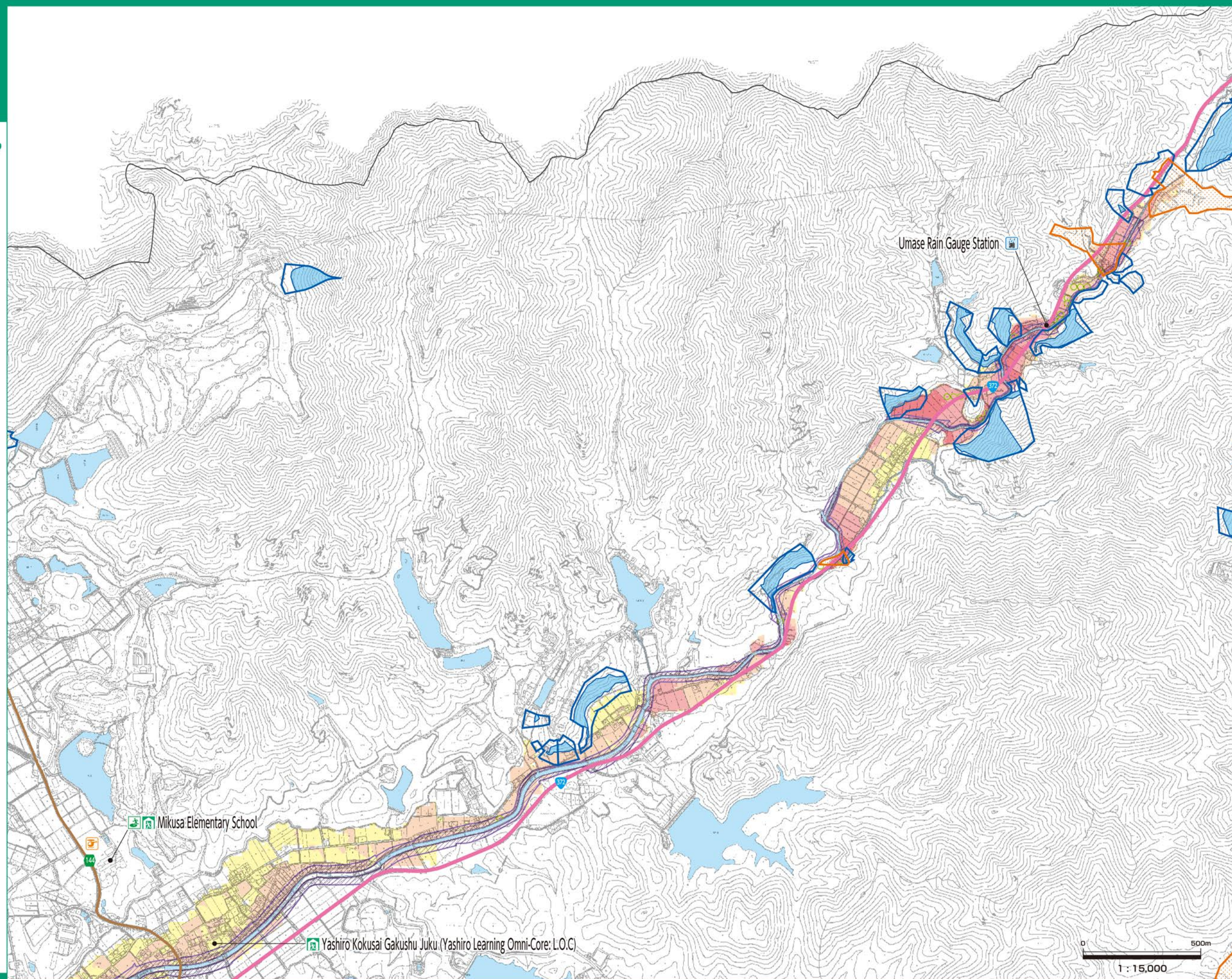
Assumed Inundation Area

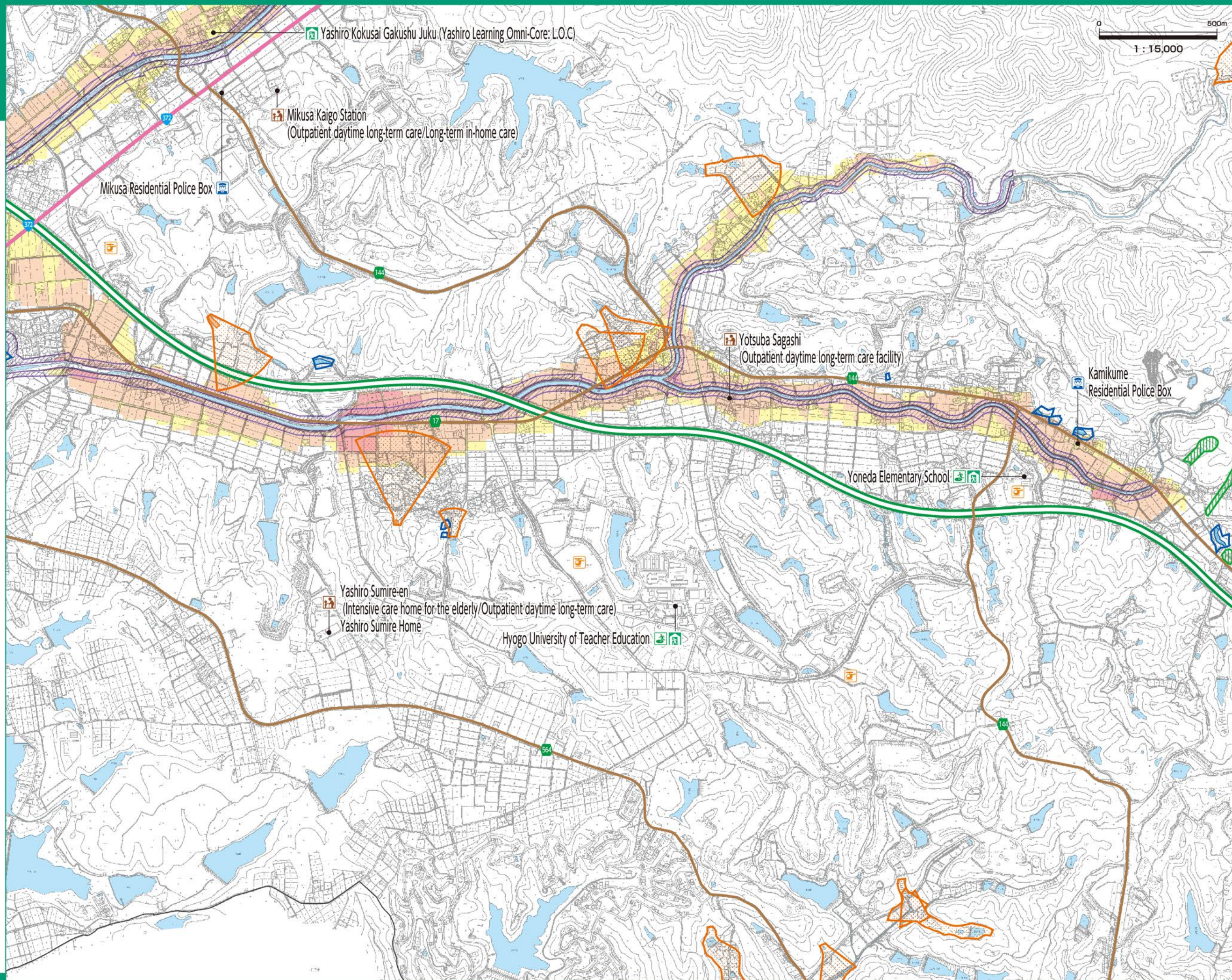
Approximate flood depth	
	10.0 m~below 20.0 m
	5.0 m~below 10.0 m
	3.0 m~below 5.0 m
	0.5 m~below 3.0 m
	Below 0.5 m
	Flooded up to the 3rd floor or above
	Flooded up to the 2nd floor
	Flooded above floor level
	Flooded below floor level

The actual flooded area due to Typhoon Tokage (Typhoon 23) in 2004

The assumed flooding area where houses are likely to collapse
(The area where early evacuation is necessary)

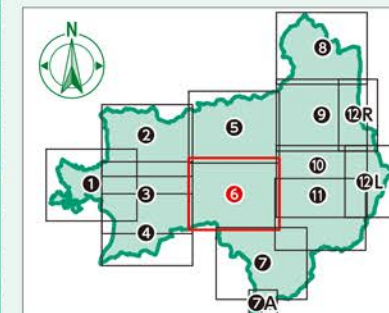
River bank erosion Flood flow





Hazard Map

Map 6



Legend

- Designated emergency evacuation site
- Designated evacuation shelter
- Welfare Shelter
- City Hall
- Fire Station
- Police Station
- Rain gauge station
- Water level station
- Heliport
- Underpass
- Expressway
- National road
- Prefectural road
- Railway (JR)

Sediment Disaster Hazard Area

	Special Hazard Area	Hazard Area
Slope failure		
Debris flow		
Landslide		

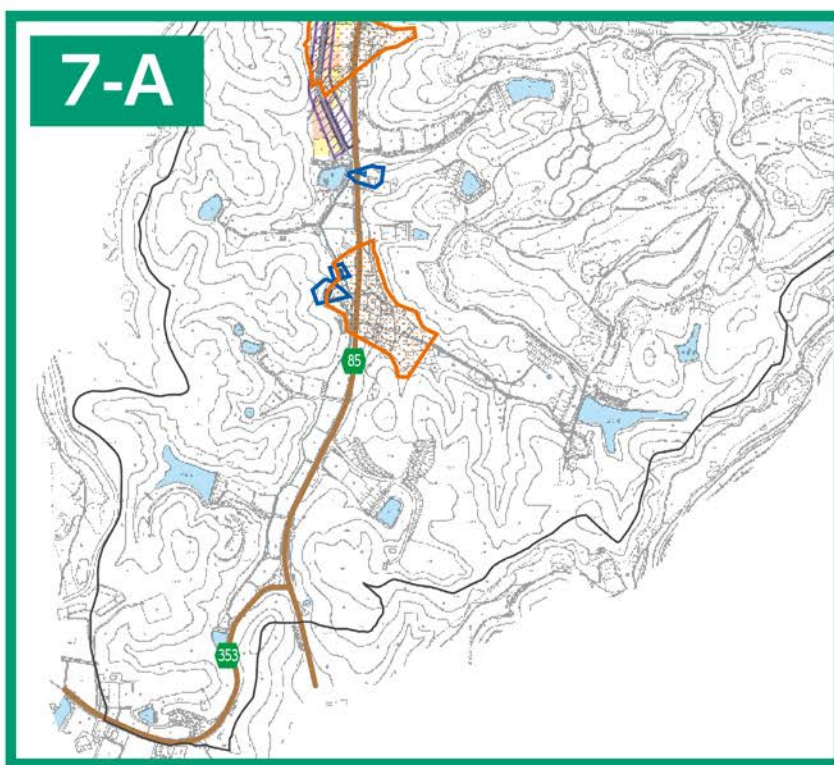
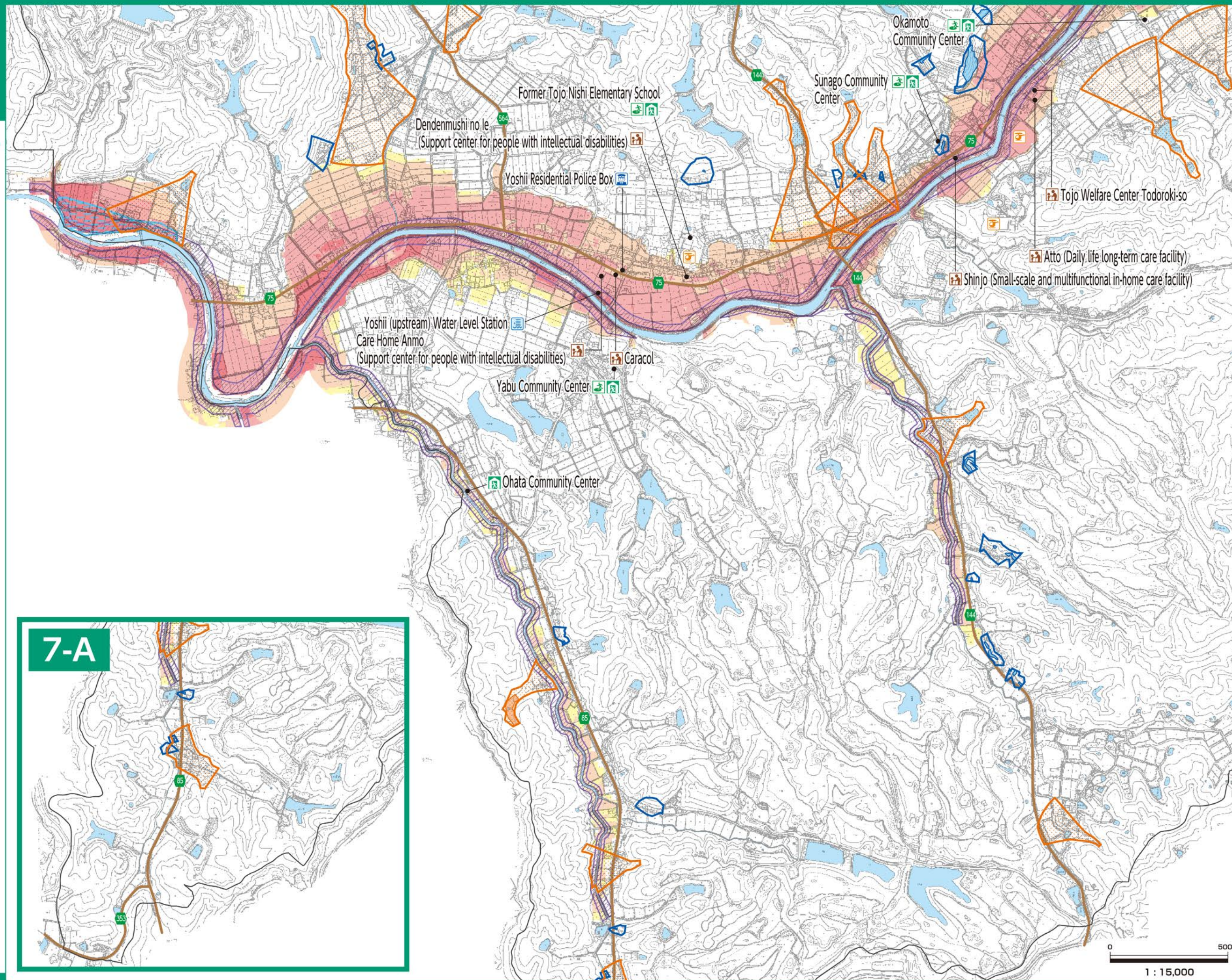
Assumed Inundation Area

Approximate flood depth	
10.0 m~below 20.0 m	
5.0 m~below 10.0 m	Flooded up to the 3rd floor or above
3.0 m~below 5.0 m	Flooded up to the 2nd floor
0.5 m~below 3.0 m	Flooded above floor level
Below 0.5 m	Flooded below floor level

The actual flooded area due to Typhoon Tokage (Typhoon 23) in 2004

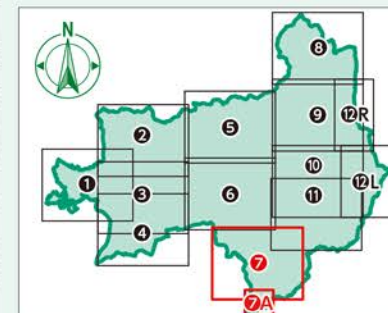
The assumed flooding area where houses are likely to collapse
(The area where early evacuation is necessary)

River bank erosion Flood flow



Hazard Map

Map 7



Legend

- Designated emergency evacuation site
- Designated evacuation shelter
- Welfare Shelter
- City Hall
- Fire Station
- Police Station
- Rain gauge station
- Water level station
- Heliport
- Underpass
- Expressway
- National road
- Prefectural road
- Railway (JR)

Sediment Disaster Hazard Area

	Special Hazard Area	Hazard Area
Slope failure		
Debris flow		
Landslide		

Assumed Inundation Area

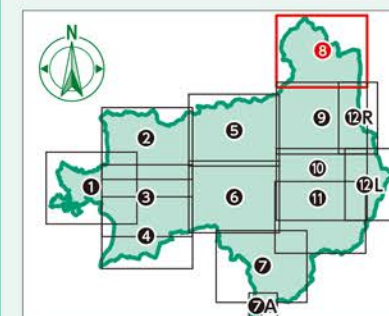
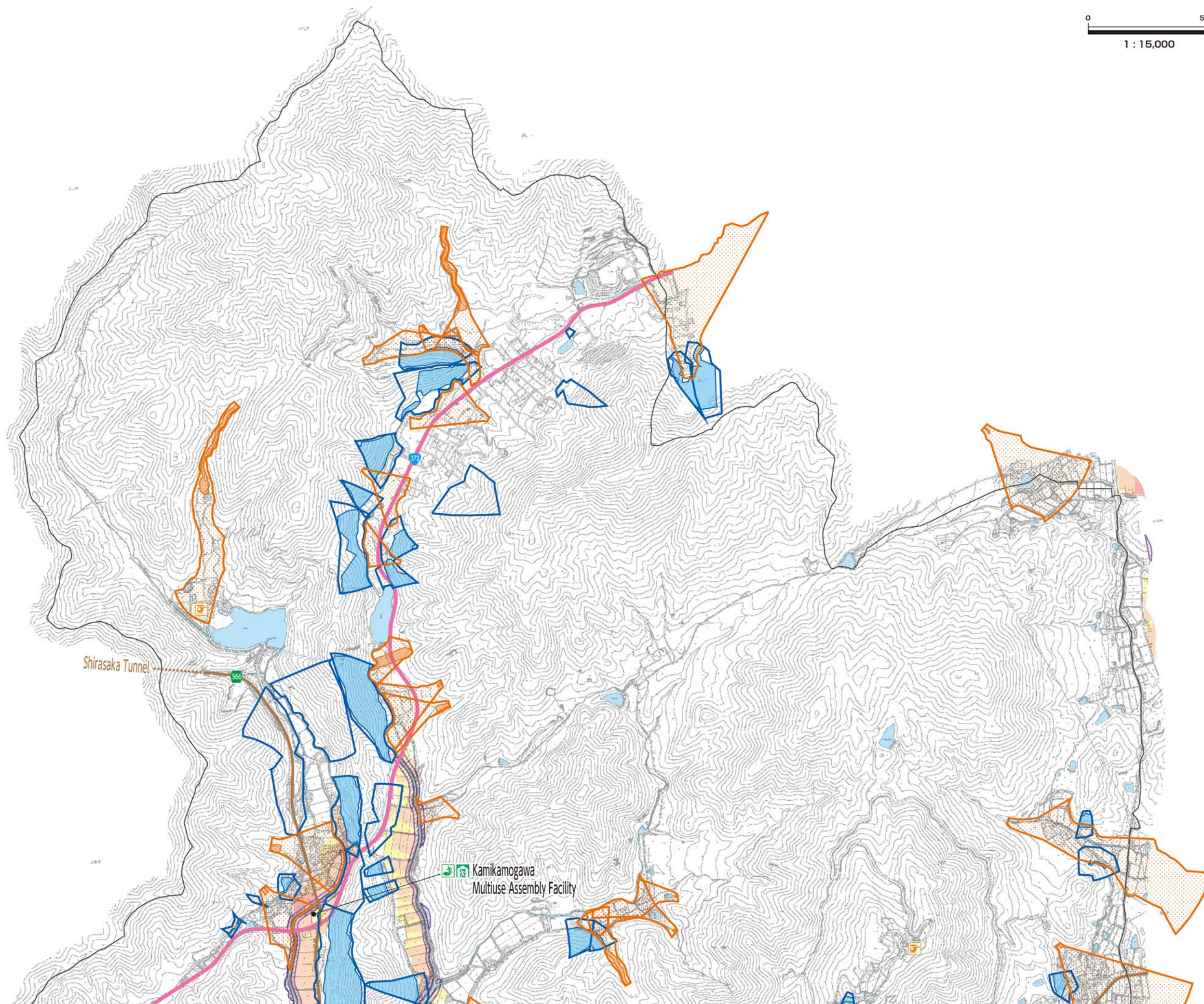
Approximate flood depth	
10.0 m~below 20.0 m	
5.0 m~below 10.0 m	Flooded up to the 3rd floor or above
3.0 m~below 5.0 m	Flooded up to the 2nd floor
0.5 m~below 3.0 m	Flooded above floor level
Below 0.5 m	Flooded below floor level

The actual flooded area due to Typhoon Tokage (Typhoon 23) in 2004

The assumed flooding area where houses are likely to collapse (The area where early evacuation is necessary)

- River bank erosion
- Flood flow

0 500m
1 : 15,000



Legend

- Designated emergency evacuation site
- Designated evacuation shelter
- Welfare Shelter
- City Hall
- Fire Station
- Police Station
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- Water level station
- Heliport
- Underpass
- Expressway
- National road
- Prefectural road
- Railway (JR)

Sediment Disaster Hazard Area

	Special Hazard Area	Hazard Area
Slope failure		
Debris flow		
Landslide		

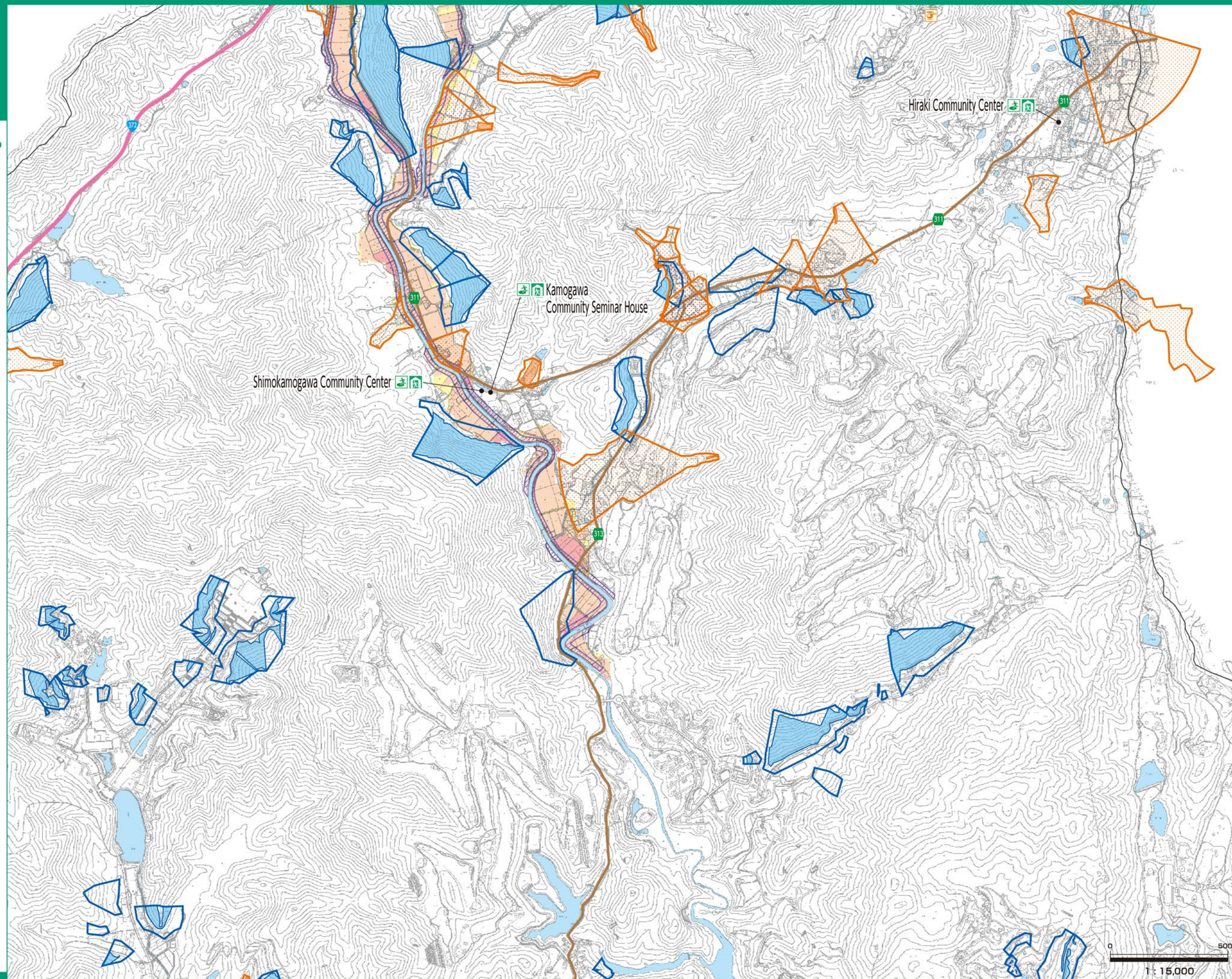
Assumed Inundation Area

Approximate flood depth	
	10.0 m~below 20.0 m
	5.0 m~below 10.0 m Flooded up to the 3rd floor or above
	3.0 m~below 5.0 m Flooded up to the 2nd floor
	0.5 m~below 3.0 m Flooded above floor level
	Below 0.5 m Flooded below floor level

The actual flooded area due to Typhoon Tokage (Typhoon 23) in 2004

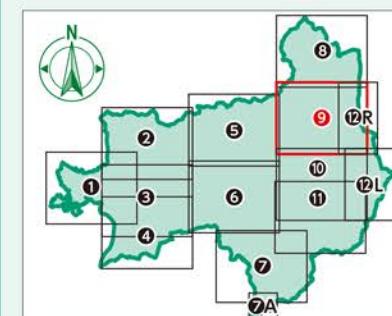
The assumed flooding area where houses are likely to collapse
(The area where early evacuation is necessary)

- River bank erosion
- Flood flow



Hazard Map

Map9



Legend

- Designated emergency evacuation site
- Designated evacuation shelter
- Welfare Shelter
- City Hall
- Fire Station
- Police Station
- Rain gauge station
- Water level station
- Heliport
- Underpass
- Expressway
- National road
- Prefectural road
- Railway (JR)

Sediment Disaster Hazard Area

	Special Hazard Area	Hazard Area
Slope failure		
Debris flow		
Landslide		

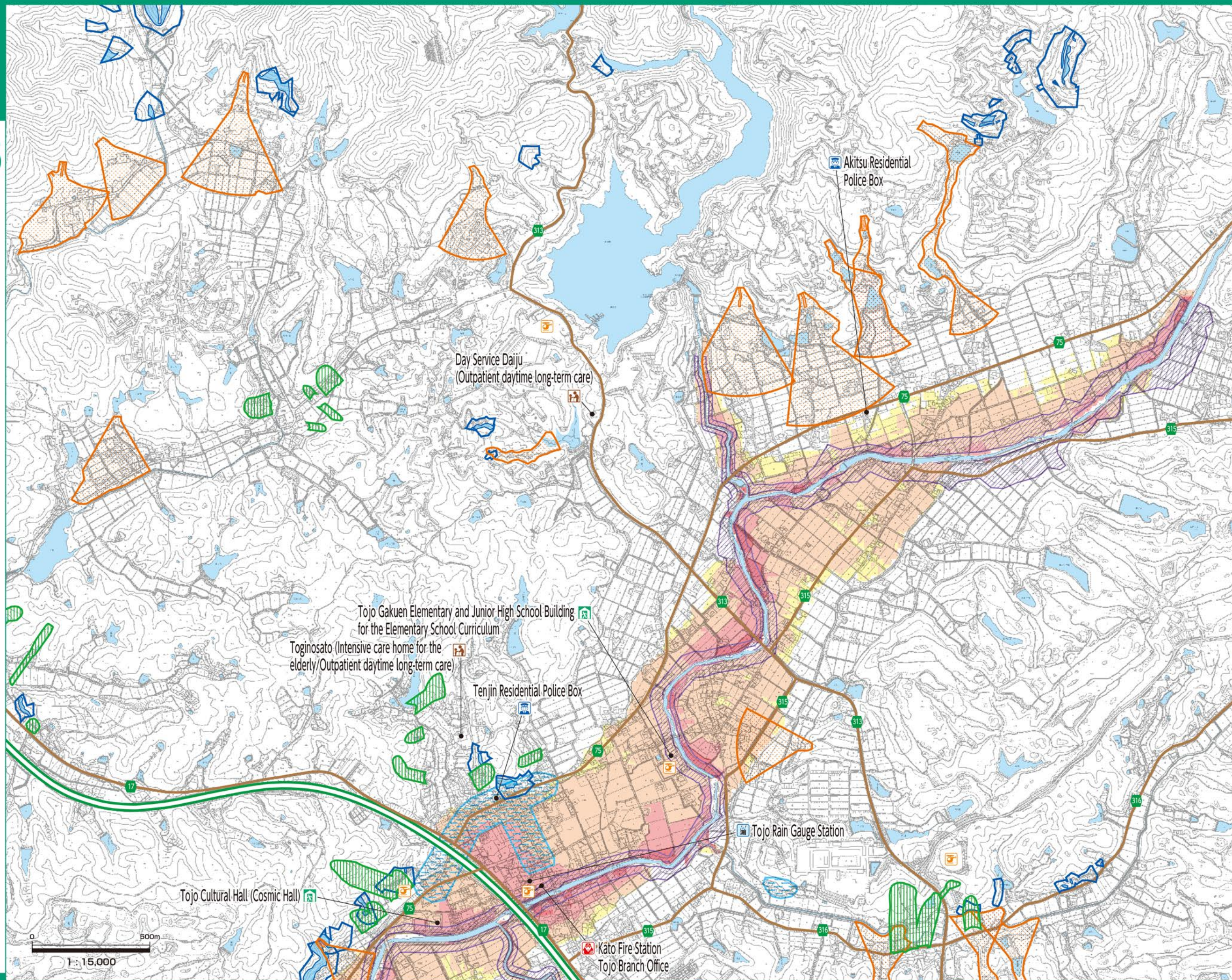
Assumed Inundation Area

Approximate flood depth	
10.0 m~below 20.0 m	
5.0 m~below 10.0 m	Flooded up to the 3rd floor or above
3.0 m~below 5.0 m	Flooded up to the 2nd floor
0.5 m~below 3.0 m	Flooded above floor level
Below 0.5 m	Flooded below floor level

The actual flooded area due to Typhoon Tokage (Typhoon 23) in 2004

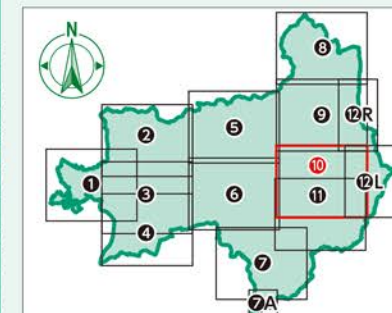
The assumed flooding area where houses are likely to collapse
(The area where early evacuation is necessary)

- River bank erosion
- Flood flow



Hazard Map

Map10



Legend

- Designated emergency evacuation site
- Designated evacuation shelter
- Welfare Shelter
- City Hall
- Fire Station
- Police Station
- Rain gauge station
- Water level station
- Heliport
- Underpass
- Expressway
- National road
- Prefectural road
- Railway (JR)

Sediment Disaster Hazard Area

	Special Hazard Area	Hazard Area
Slope failure		
Debris flow		
Landslide		

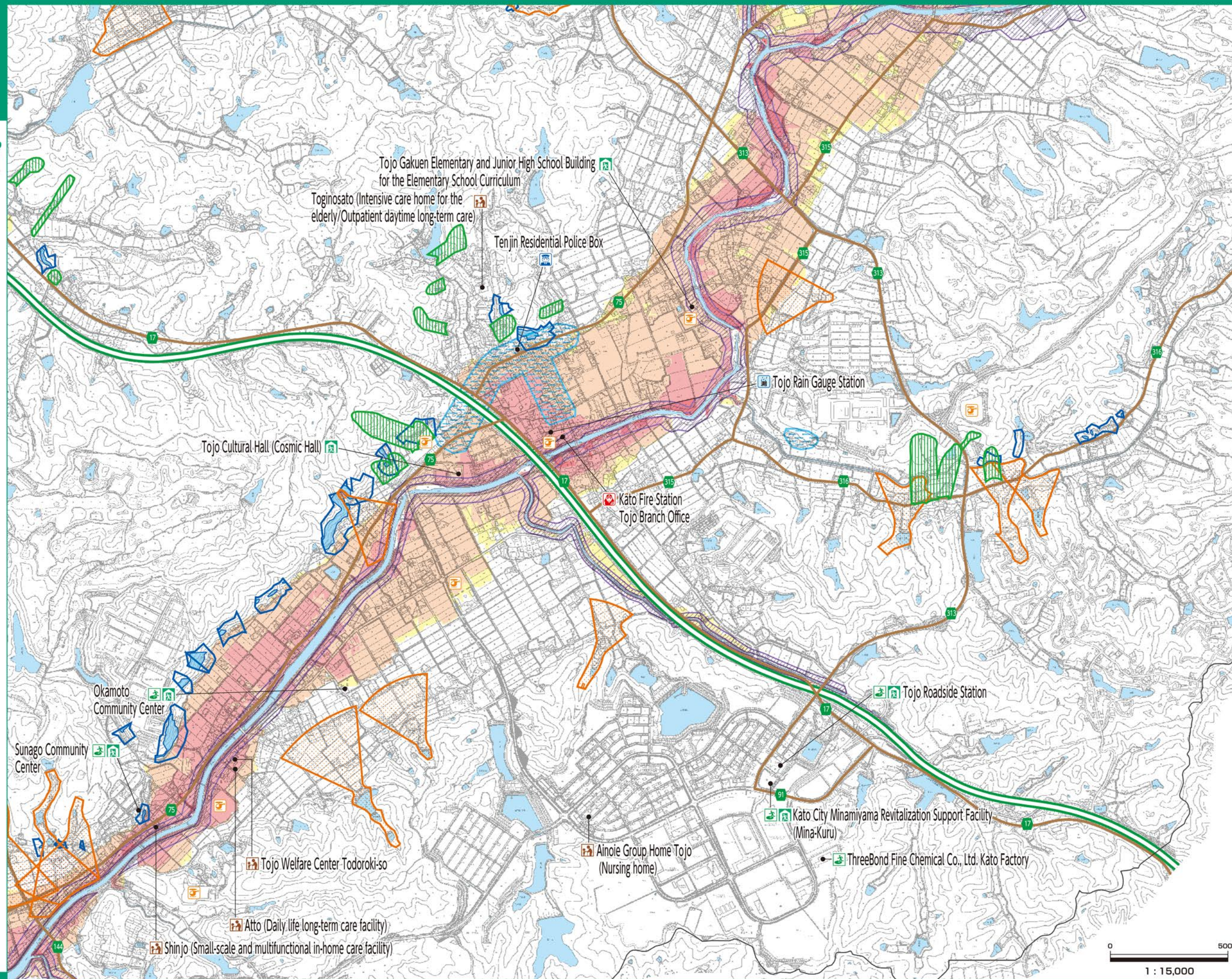
Assumed Inundation Area

Approximate flood depth	
10.0 m~below 20.0 m	
5.0 m~below 10.0 m	Flooded up to the 3rd floor or above
3.0 m~below 5.0 m	Flooded up to the 2nd floor
0.5 m~below 3.0 m	Flooded above floor level
Below 0.5 m	Flooded below floor level

The actual flooded area due to Typhoon Tokage (Typhoon 23) in 2004

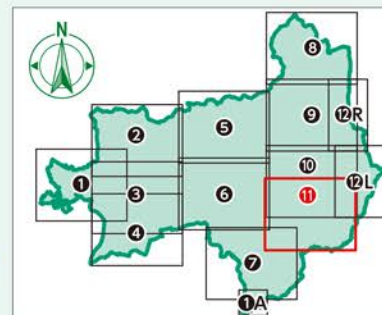
The assumed flooding area where houses are likely to collapse
(The area where early evacuation is necessary)

- River bank erosion
- Flood flow



Hazard Map

Map 11



Legend

- Designated emergency evacuation site
- Designated evacuation shelter
- Welfare Shelter
- City Hall
- Fire Station
- Police Station
- Rain gauge station
- Water level station
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- Underpass
- Expressway
- National road
- Prefectural road
- Railway (JR)

Sediment Disaster Hazard Area

	Special Hazard Area	Hazard Area
Slope failure		
Debris flow		
Landslide		

Assumed Inundation Area

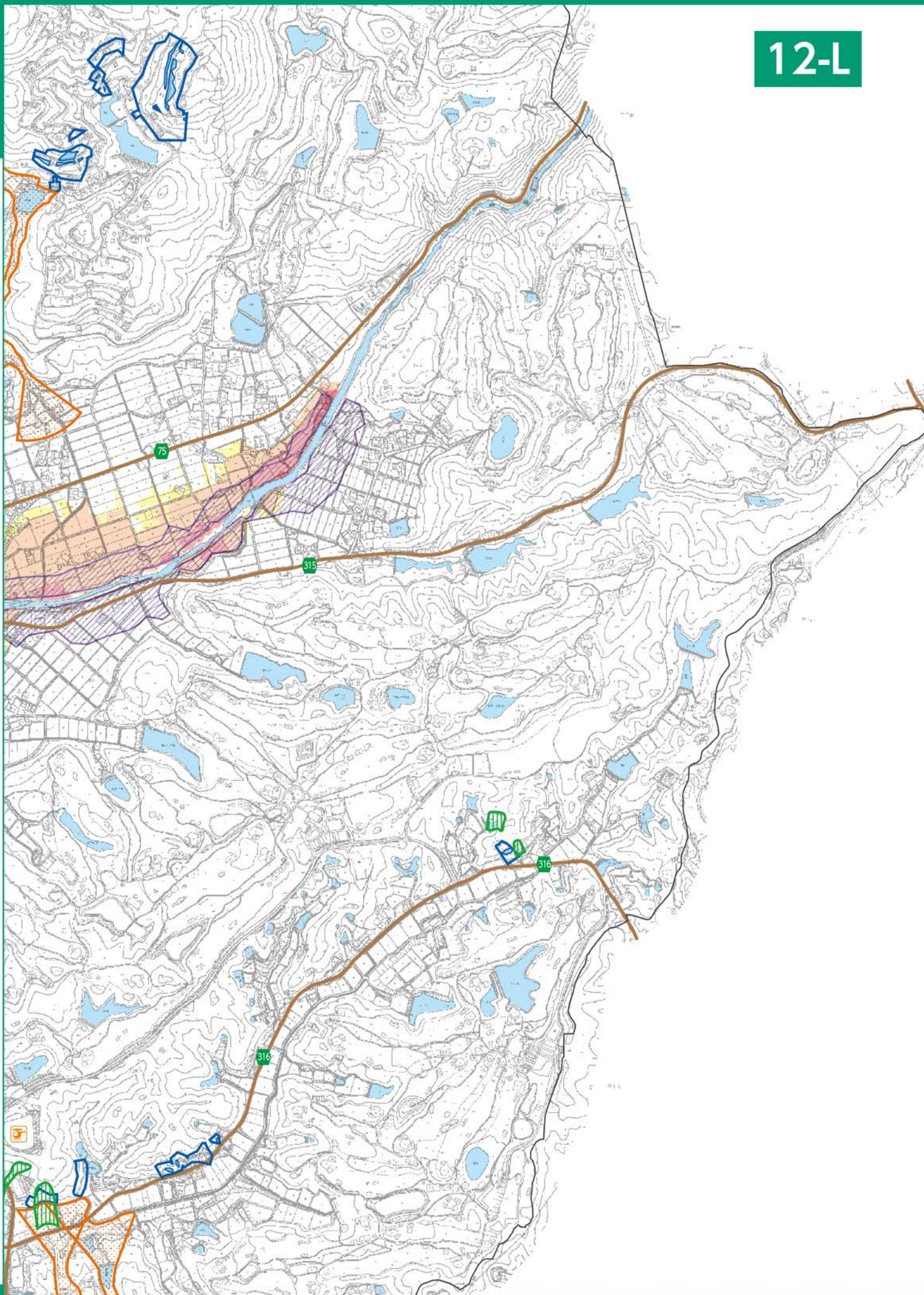
Approximate flood depth	
10.0 m~below 20.0 m	
5.0 m~below 10.0 m	Flooded up to the 3rd floor or above
3.0 m~below 5.0 m	Flooded up to the 2nd floor
0.5 m~below 3.0 m	Flooded above floor level
Below 0.5 m	Flooded below floor level

The actual flooded area due to Typhoon Tokage (Typhoon 23) in 2004

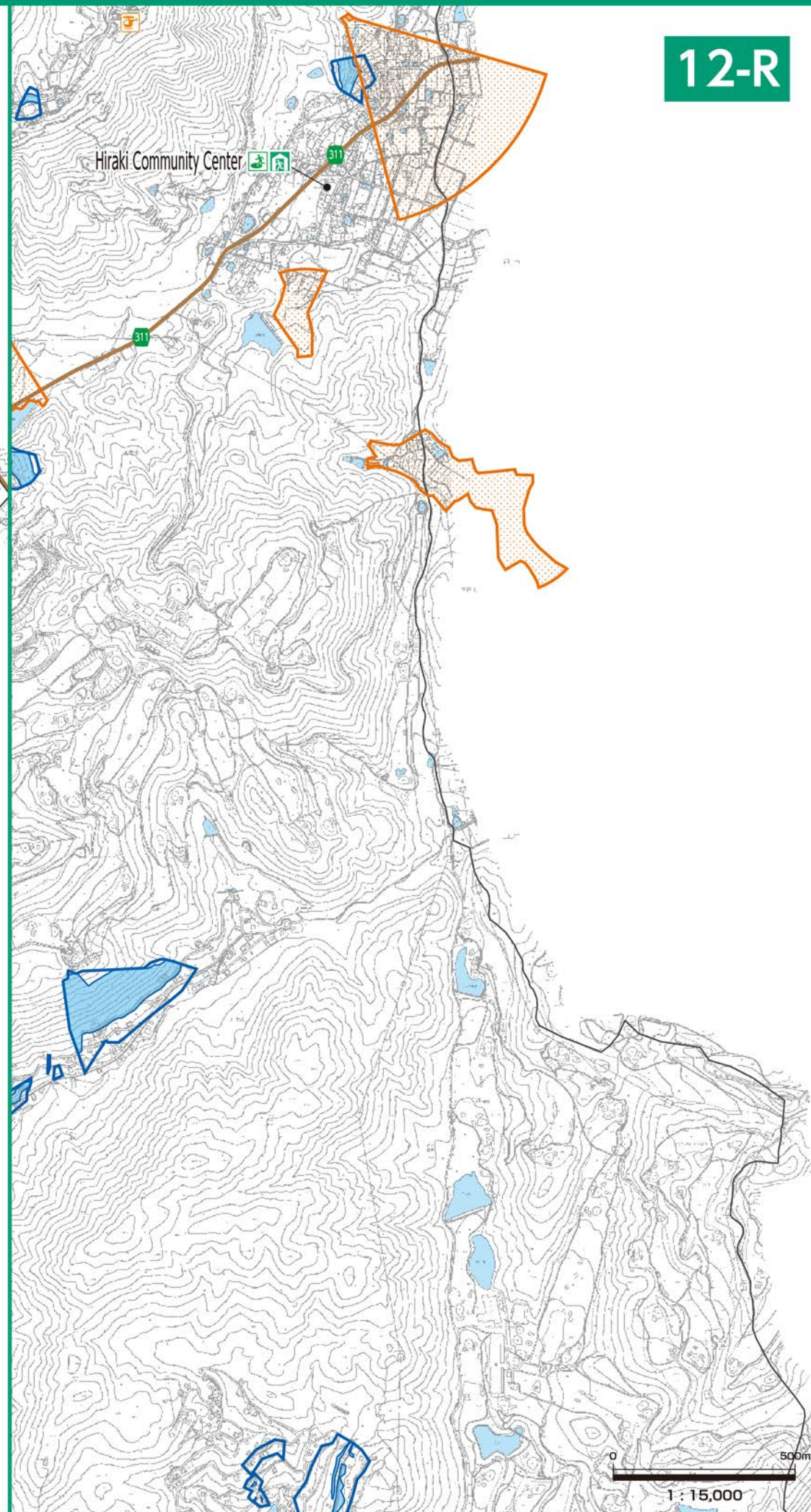
The assumed flooding area where houses are likely to collapse
(The area where early evacuation is necessary)

River bank erosion Flood flow

0 500m
1 : 15,000



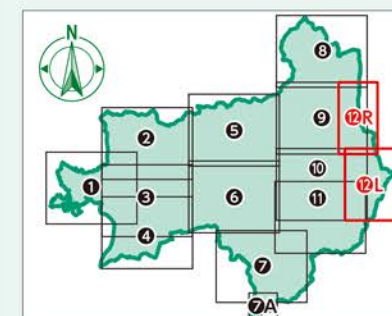
12-L



12-R

Hazard Map

Map12



Legend

- Designated emergency evacuation site
- Designated evacuation shelter
- Welfare Shelter
- City Hall
- Fire Station
- Police Station
- Rain gauge station
- Water level station
- Heliport
- Underpass
- Expressway
- National road
- Prefectural road
- Railway (JR)

Sediment Disaster Hazard Area

	Special Hazard Area	Hazard Area
Slope failure		
Debris flow		
Landslide		

Assumed Inundation Area

Approximate flood depth	
10.0 m~below 20.0 m	
5.0 m~below 10.0 m	Flooded up to the 3rd floor or above
3.0 m~below 5.0 m	Flooded up to the 2nd floor
0.5 m~below 3.0 m	Flooded above floor level
Below 0.5 m	Flooded below floor level

The actual flooded area due to Typhoon Tokage (Typhoon 23) in 2004

The assumed flooding area where houses are likely to collapse
(The area where early evacuation is necessary)

River bank erosion Flood flow

0 500m
1 : 15,000

Legend

- City Hall
- Fire Station
- Police Station
- Rain gauge station
- Water level station
- Expressway
- National road
- Prefectural road
- Railway (JR)

Assumed Inundation Area

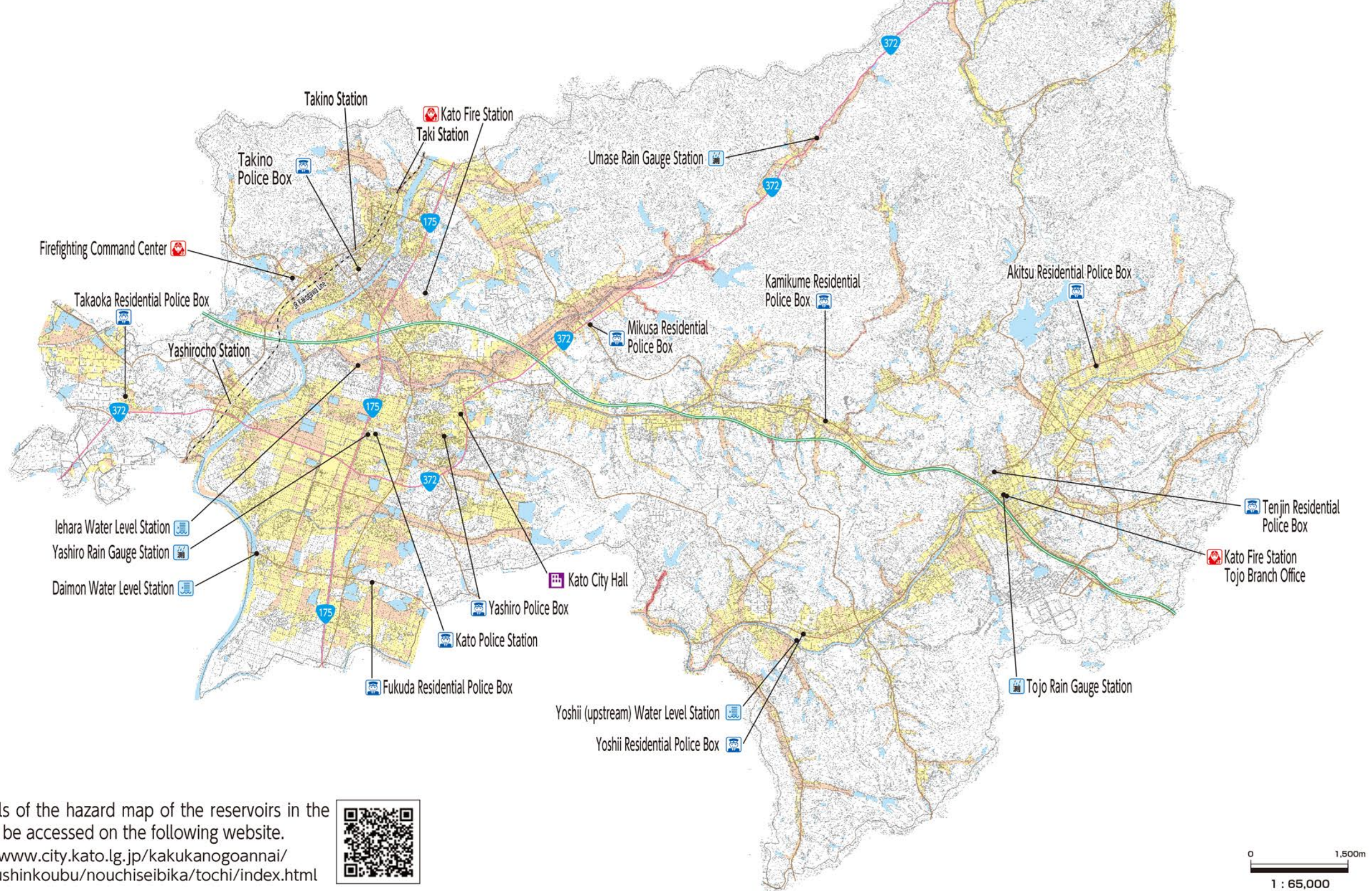
Approximate flood depth	
10.0 m~below 20.0 m	
5.0 m~below 10.0 m	Flooded up to the 3rd floor or above
3.0 m~below 5.0 m	Flooded up to the 2nd floor
0.5 m~below 3.0 m	Flooded above floor level
Below 0.5 m	Flooded below floor level



The assumed inundation areas shown in this map consist of the "Map of assumed inundation areas of the reservoirs" created by Hyogo Prefectural Office assuming that the reservoirs fill up and burst and the "Hazard map of the reservoirs" created by Kato Municipal Office.

By superimposing all assumed inundation areas of the reservoirs in question, the maximum possible inundation extent and depth are shown.

The actual inundation areas may vary, depending on factors such as the amount of water stored in the reservoirs, the degree of the damage to the levee bodies, and the state of the use of the surrounding areas.



Details of the hazard map of the reservoirs in the city can be accessed on the following website.
<https://www.city.kato.lg.jp/kakukanogoannai/sangyoushinkoubu/nouchiseibika/tochi/index.html>



0 1,500m
1 : 65,000