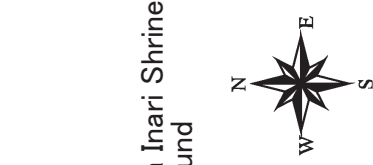


Earthquake / Tsunami



Expected tsunami inundation depth of the largest class

- under 0.5m
- 0.5m ~ 3m
- 3m ~ 5m
- 5m ~ 10m
- 10m ~ 20m
- 20m and over

Actual inundation area by tsunami (Great East Japan Earthquake)

Evacuation direction from tsunami

Tsunami Evacuation Area

- Tsunami Evacuation Area
- Tsunami Evacuation Building
- Evacuation Area
- Hospital
- Fire Station/Branch
- Firefighting Corps
- Police Station
- Police Box/Substation
- Post Office
- City Government
- General Office/Branch Office

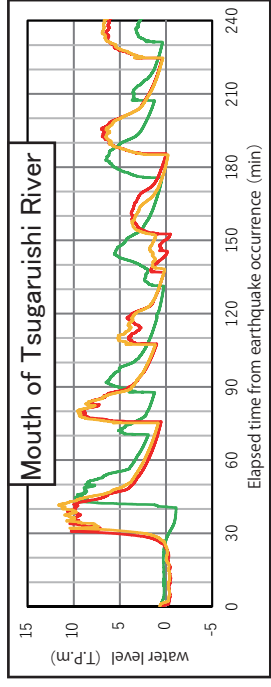
Other Facilities

- Helicopter
- Sub Unit of Municipal Disaster Management Systems
- Sea level display board
- Natural disaster memorial monument
- Seawall
- Floodwall gate
- Automatic closing waiting time
- Flood gate
- Automatic closing waiting time
- Main Road
- City Boundary

Takahama District		
Maximum tsunami water level (T.P.,m)	Impact starting time (±20cm)	Maximum wave
11.5	20min	32min
		38min

Tsuraruishi Fishing Port		
Maximum tsunami water level (T.P.,m)	Impact starting time (±20cm)	Maximum wave
11.5	21min	33min
		38min

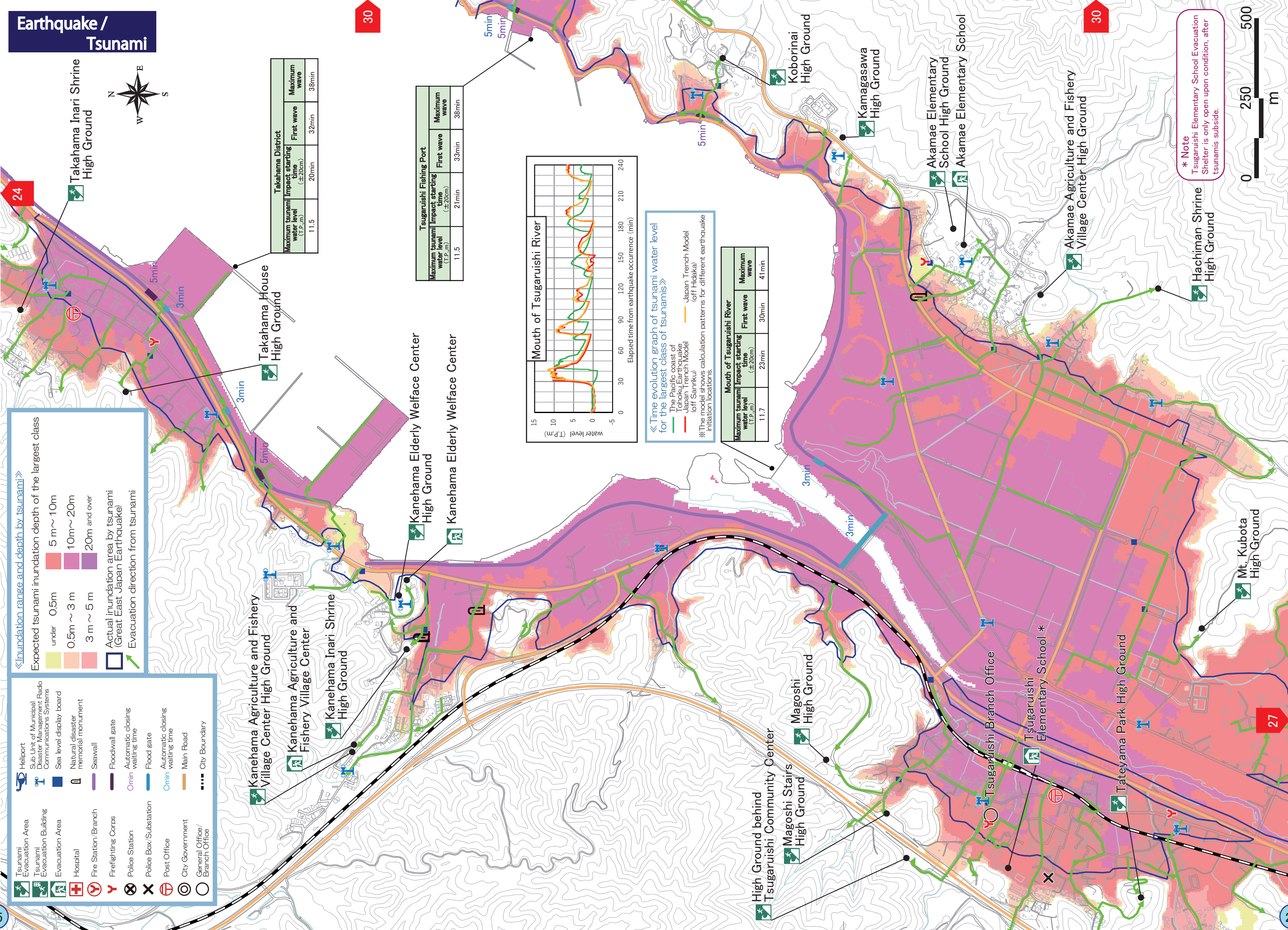
Mouth of Tsuraruishi River		
Maximum tsunami water level (T.P.,m)	Impact starting time (±20cm)	Maximum wave
11.7	23min	30min
		41min



Time evolution graph of tsunami water level for the largest class of tsunamis

The Pacific coast of Tohoku Earthquake
Japan Trench Model (off Hiakata)
Japan Trench Model (off Sanriku)

*The model shows calculation patterns for different earthquake initiation locations.



* Note
Tsuraruishi Elementary School Evacuation Shelter is only open upon condition, after tsunamis subside.

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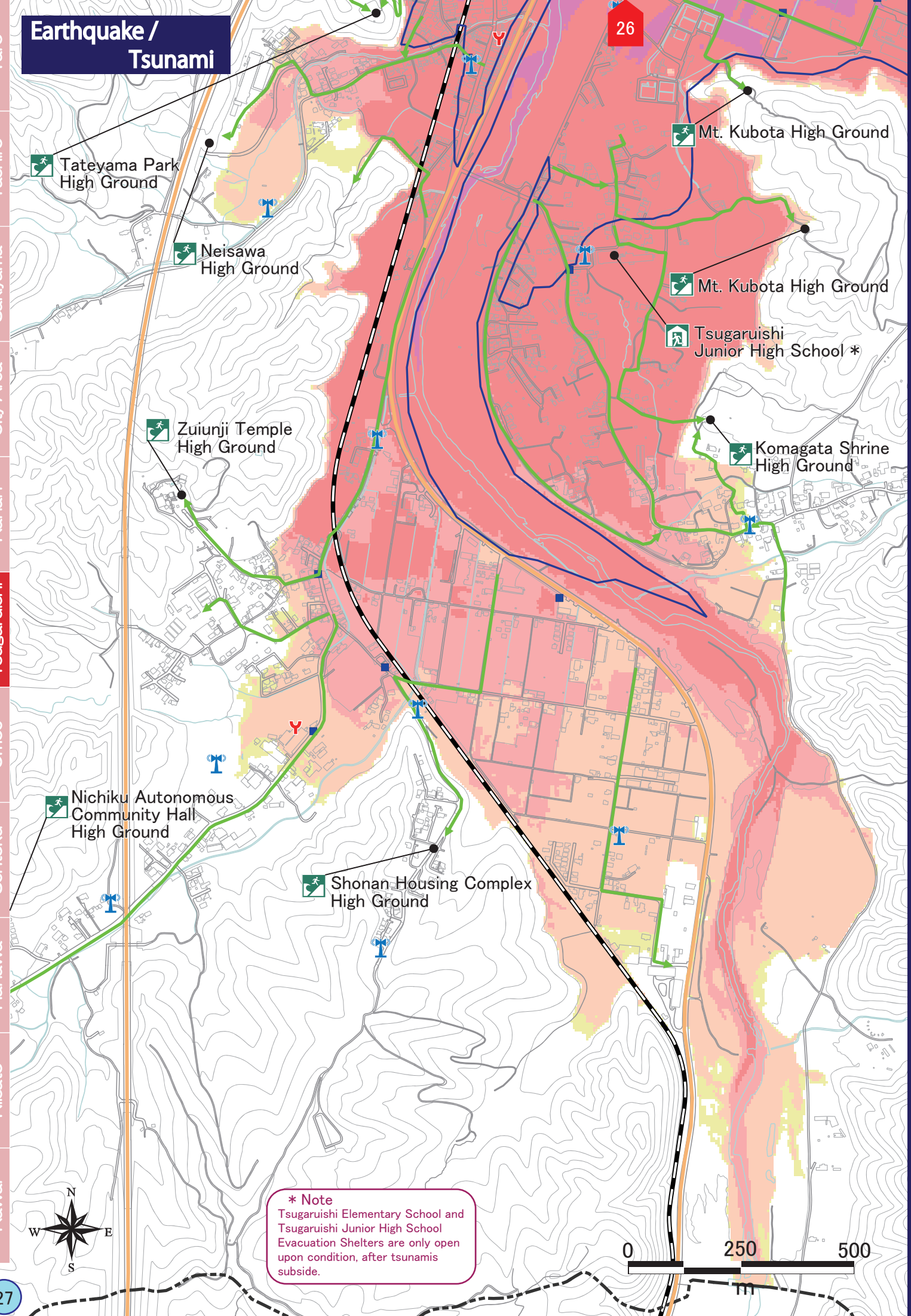
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Earthquake / Tsunami



*** Note**
Tsugaruishi Elementary School and Tsugaruishi Junior High School Evacuation Shelters are only open upon condition, after tsunamis subside.

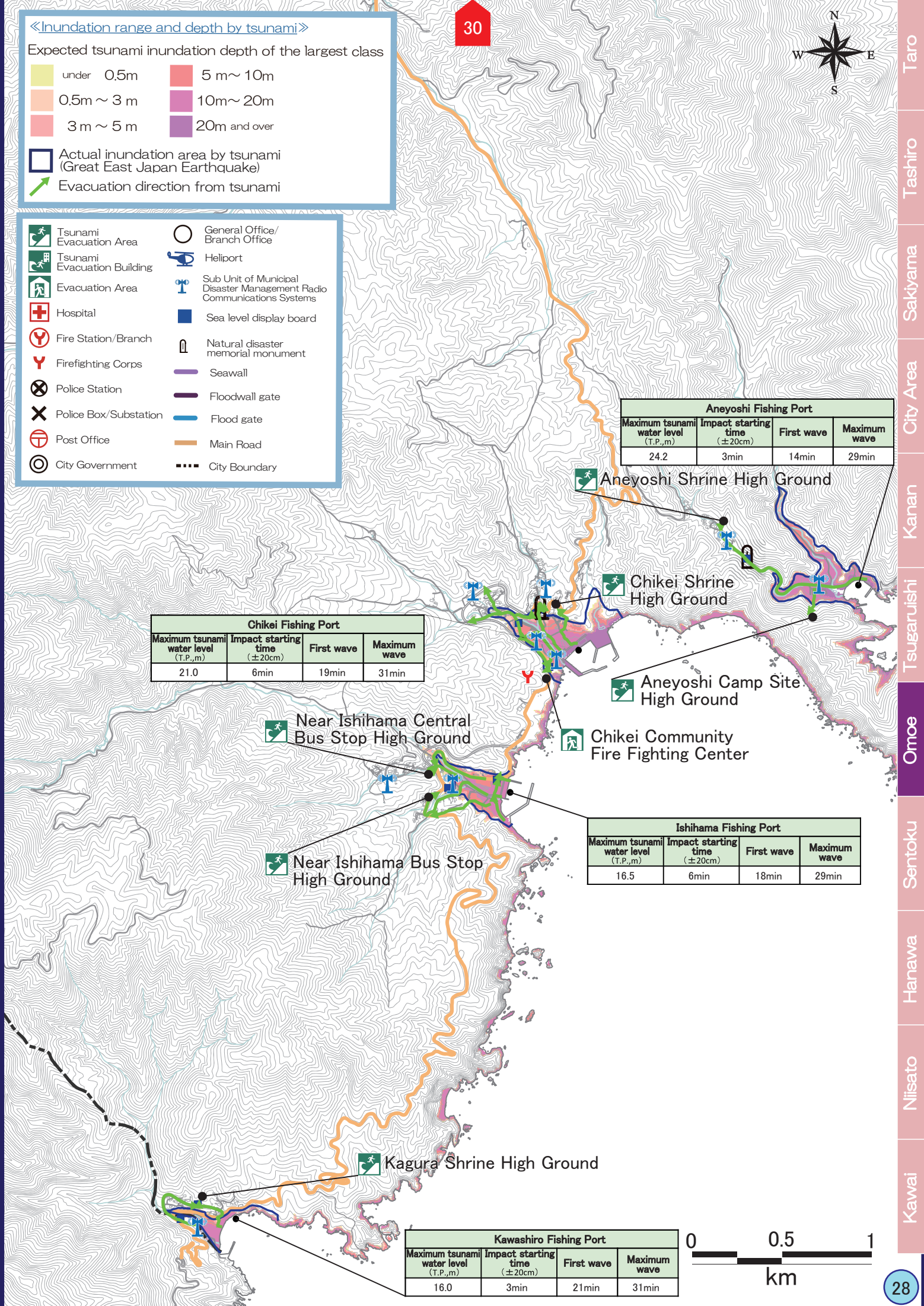


Expected tsunami inundation depth of the largest class

under 0.5m	5 m ~ 10m
0.5m ~ 3 m	10m ~ 20m
3 m ~ 5 m	20m and over

Actual inundation area by tsunami (Great East Japan Earthquake)
Evacuation direction from tsunami

Tsunami Evacuation Area	General Office/Branch Office
Tsunami Evacuation Building	Heliport
Evacuation Area	Sub Unit of Municipal Disaster Management Radio Communications Systems
Hospital	Sea level display board
Fire Station/Branch	Natural disaster memorial monument
Firefighting Corps	Seawall
Police Station	Floodwall gate
Police Box/Substation	Flood gate
Post Office	Main Road
City Government	City Boundary

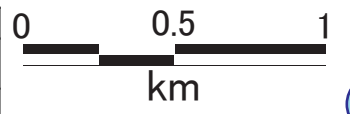


Aneyoshi Fishing Port			
Maximum tsunami water level (T.P.,m)	Impact starting time (±20cm)	First wave	Maximum wave
24.2	3min	14min	29min

Chikei Fishing Port			
Maximum tsunami water level (T.P.,m)	Impact starting time (±20cm)	First wave	Maximum wave
21.0	6min	19min	31min

Ishihama Fishing Port			
Maximum tsunami water level (T.P.,m)	Impact starting time (±20cm)	First wave	Maximum wave
16.5	6min	18min	29min

Kawashiro Fishing Port			
Maximum tsunami water level (T.P.,m)	Impact starting time (±20cm)	First wave	Maximum wave
16.0	3min	21min	31min



Earthquake / Tsunami



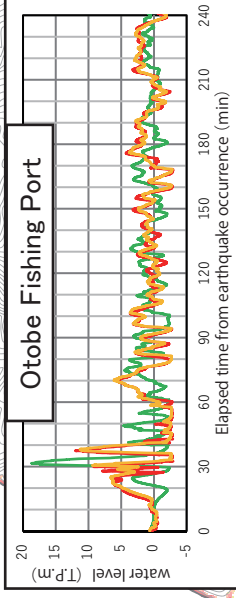
Legend

- Tsunami Evacuation Area
- Tsunami Evacuation Building
- Hospital
- Fire Station/Branch
- Firefighting Corps
- Police Station
- Police Box/Substation
- Post Office
- City Government
- General Office/Branch Office
- Heliport
- Sub Unit of Municipal Disaster Management Radio Communications Systems
- Sea level display board
- Natural disaster memorial monument
- Seawall
- Floodwall gate
- Flood gate
- Main Road
- City Boundary

Inundation range and depth by tsunami

- Expected tsunami inundation depth of the largest class
 - under 0.5m
 - 0.5m ~ 3 m
 - 3 m ~ 5 m
 - 5 m ~ 10m
 - 10m ~ 20m
 - 20m and over
- Actual inundation area by tsunami (Great East Japan Earthquake)
- Evacuation direction from tsunami

Uranosawa Fishing Port		
Maximum tsunami water level (T.P.,m)	12.7	
Impact starting time (±20cm)	11min	
First wave	24min	
Maximum wave	37min	



Time evolution graph of tsunami water level for the largest class of tsunamis

The Pacific coast of Tohoku (off Sanriku)
 Japan Trench Model (off Hidakai)
 Japan Trench Model (off Sanriku)

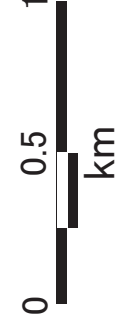
※The model shows calculation patterns for different earthquake initiation locations.

Shirahama Fishing Port		
Maximum tsunami water level (T.P.,m)	9.6	
Impact starting time (±20cm)	18min	
First wave	30min	
Maximum wave	40min	

Otobe Fishing Port		
Maximum tsunami water level (T.P.,m)	18.7	
Impact starting time (±20cm)	8min	
First wave	18min	
Maximum wave	31min	

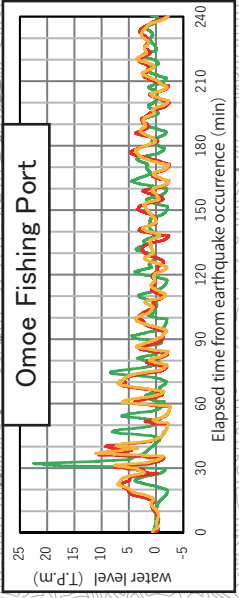
Nakakumi Fishing Port		
Maximum tsunami water level (T.P.,m)	24.1	
Impact starting time (±20cm)	3min	
First wave	22min	
Maximum wave	31min	

Mouth of Uiso River		
Maximum tsunami water level (T.P.,m)	21.3	
Impact starting time (±20cm)	4min	
First wave	18min	
Maximum wave	31min	



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Omoe Fishing Port		
Maximum tsunami water level (T.P.,m)	22.5	
Impact starting time (±20cm)	8min	
First wave	18min	
Maximum wave	32min	

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