



Tokyo Metropolitan Government Disaster Prevention Guide Book



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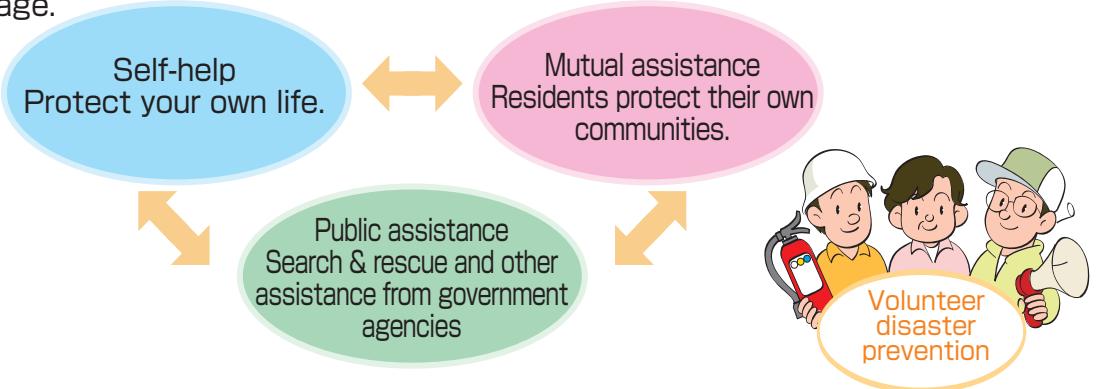
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Section 1 Introduction

Tokyo faces a wide variety of potential threats, from natural disasters like an earthquake directly hitting Tokyo or typhoons to terrorism, large-scale accidents, or outbreak of disease. This guide book has been published in order to inform you of the various efforts that the Tokyo Metropolitan Government (TMG) is making toward disaster prevention.

Importance of self-help, mutual assistance, and public assistance

Self-help, mutual assistance, and public assistance are important for improving the ability to respond and cooperate in the event of a disaster in order to minimize the disaster damage.



Section 2 Preparation for Natural Disasters

1. Natural Disaster Risks

(1) Earthquakes

Earthquakes that Could Foreseeably Strike Metropolitan Tokyo

Tokyo in the past has been much damaged by large earthquakes such as the Great Kanto Earthquake. Further, the Great East Japan Earthquake demonstrated that there are some earthquakes that even though remote can cause chain-reaction damage.

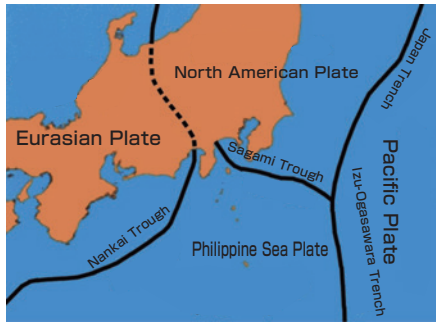
Geographic Characteristics of Tokyo

Directly beneath metropolitan Tokyo, the Pacific plate from the east and the Philippine Sea plate from the south are pushing under the side of the continental plate.

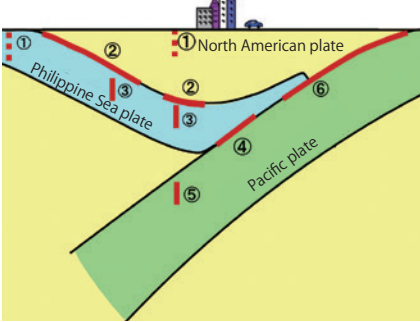
When the edge of a plate at this plate boundary springs up, it can cause an M8 Class submarine trench earthquake. In the southern Kanto area, it is assumed that the direct hit of an M7 class earthquake occurs several times between the earthquakes of the Great Kanto Earthquake class which occur at intervals of 200 to 400 years.

In addition to the electricity that powers its urban functions, Tokyo also depends on other regions for many materials such as food and daily necessities, so even earthquakes outside of the metropolitan area can affect the city, such as cutting off the power supply or disrupting distribution.

[Plate boundaries in the Kanto area]



[Types of earthquakes that occur in the southern Kanto area]
(Source: Cabinet Office website)



- Epicenters of earthquakes that occur in the southern Kanto area
- ① Earthquake shallow in the Earth's crust
 - ② Earthquake at the boundary between the Philippine Sea plate and the North American plate
 - ③ Earthquake within the Philippine Sea plate
 - ④ Earthquake at the boundary between the Philippine Sea plate and the Pacific plate
 - ⑤ Earthquake within the Pacific plate
 - ⑥ Earthquake at the boundary between the Philippine Sea Plate and North American Plate and Pacific Plate

Examples of possible earthquakes (from Damage Estimates in Tokyo due to an Earthquake directly hitting Tokyo (April 2012))

In the case of an earthquake (M7.3) in the northern part of Tokyo Bay that causes maximum damage in Tokyo, it is expected that some areas will experience seismic intensity level 7, while approximately 70% of the Tokyo ward area will experience seismic intensity level 6-upper or higher. In addition to building damage and loss of life caused by the tremors and fires primarily in areas of the city where there are closely packed wooden houses, there are also expected to be many stranded persons who are unable to return home due to the interruption of public transportation, traffic congestion, and other problems. An earthquake that would produce the largest tsunami along the Tokyo coast would be a Genroku type Kanto Earthquake (M8.2) which would produce a T.P.* +2.61 meter tsunami at high tide.

* Tokyo Bay mean sea level

Estimated Damage to Tokyo

① Earthquake directly hitting Tokyo

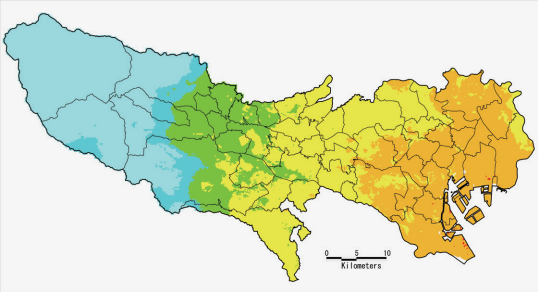
(A) Damage Estimation

According to the Headquarters for Earthquake Research Promotion, within the next 30 years, there is a 70% chance of a large inland earthquake hitting the southern Kanto area, with an epicenter directly below the metropolitan area.

In the wake of the Great East Japan Earthquake, TMG made a sweeping review of the damage estimate officially announced in May 2006 and officially announced the "Damage Estimates in Tokyo due to an Earthquake directly hitting Tokyo" in April 2012. Its summary is as follows.

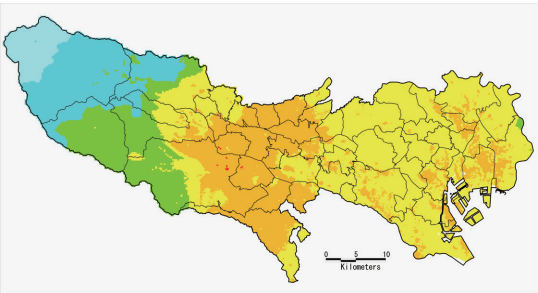
			(Earthquake directly hitting Tokyo)		(Submarine trench earthquake)	(Earthquake occurring in an active fault)	
			Tokyo Bay North Area Earthquake (M7.3)	Earthquake beneath Tama (M7.3)	Genroku Type Kanto Earthquake (M8.2)	Tachikawa Fault Zone Earthquake (M7.4)	
Casualties	By cause	Total Deaths	approx. 9,700	approx. 4,700	approx. 5,900	approx. 2,600	
		Quake	approx. 5,600	approx. 3,400	approx. 3,500	approx. 1,500	
		Fire	approx. 4,100	approx. 1,300	approx. 2,400	approx. 1,100	
	By cause	Total Injured	approx. 147,600	approx. 101,100	approx. 108,300	approx. 31,700	
		Severely injured	(approx. 21,900)	(approx. 10,900)	(approx. 12,900)	(approx. 4,700)	
		Quake	approx. 129,900	approx. 96,500	approx. 98,500	approx. 27,800	
	By cause	Fire	approx. 17,700	approx. 4,600	approx. 9,800	approx. 3,900	
		Property Damage	Total Buildings Damaged	approx. 304,300	approx. 139,500	approx. 184,600	approx. 85,700
			Quake	approx. 116,200	approx. 75,700	approx. 76,500	approx. 35,400
Fire	approx. 188,100		approx. 63,800	approx. 108,100	approx. 50,300		
Evacuees (Peak: the following day)		approx. 3,390,000	approx. 2,760,000	approx. 3,200,000	approx. 1,010,000		
Stranded persons			approx. 5,170,000				

(B) Distribution of seismic intensities



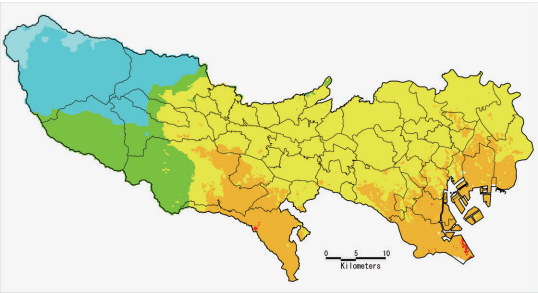
Earthquake directly hitting Tokyo Tokyo Bay North Area Earthquake (M7.3)

The predicted surface seismic intensities are higher than in past estimates because it was discovered that the position of the Philippine Sea Plate is shallower than previously thought. This means that areas of seismic intensity level 7 are expected and approximately 70% of the Tokyo ward area is expected to experience a seismic intensity of 6-upper or higher.



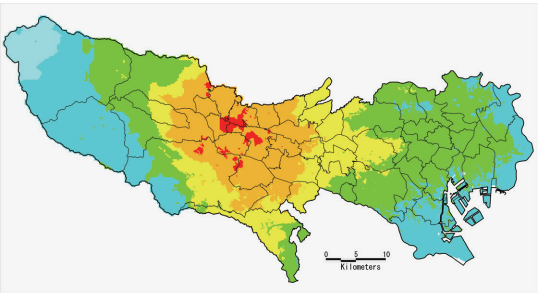
Earthquake beneath Tama (M7.3)

This estimate expects primarily a seismic intensity level of 6-upper because it was discovered that the position of the Philippine Sea Plate is shallower than previously thought. This means that some areas of seismic intensity level 7 are expected and approximately 40% of the Tama area is expected to experience a seismic intensity of 6-upper or higher.



Submarine trench earthquake Genroku Type Kanto Earthquake (M8.2)

The surface intensity will be greatest on the south side of Tokyo, with Shinagawa Ward, Ota Ward, and Machida City mostly experiencing a seismic intensity level of 6-upper, although some level 7 areas are expected.



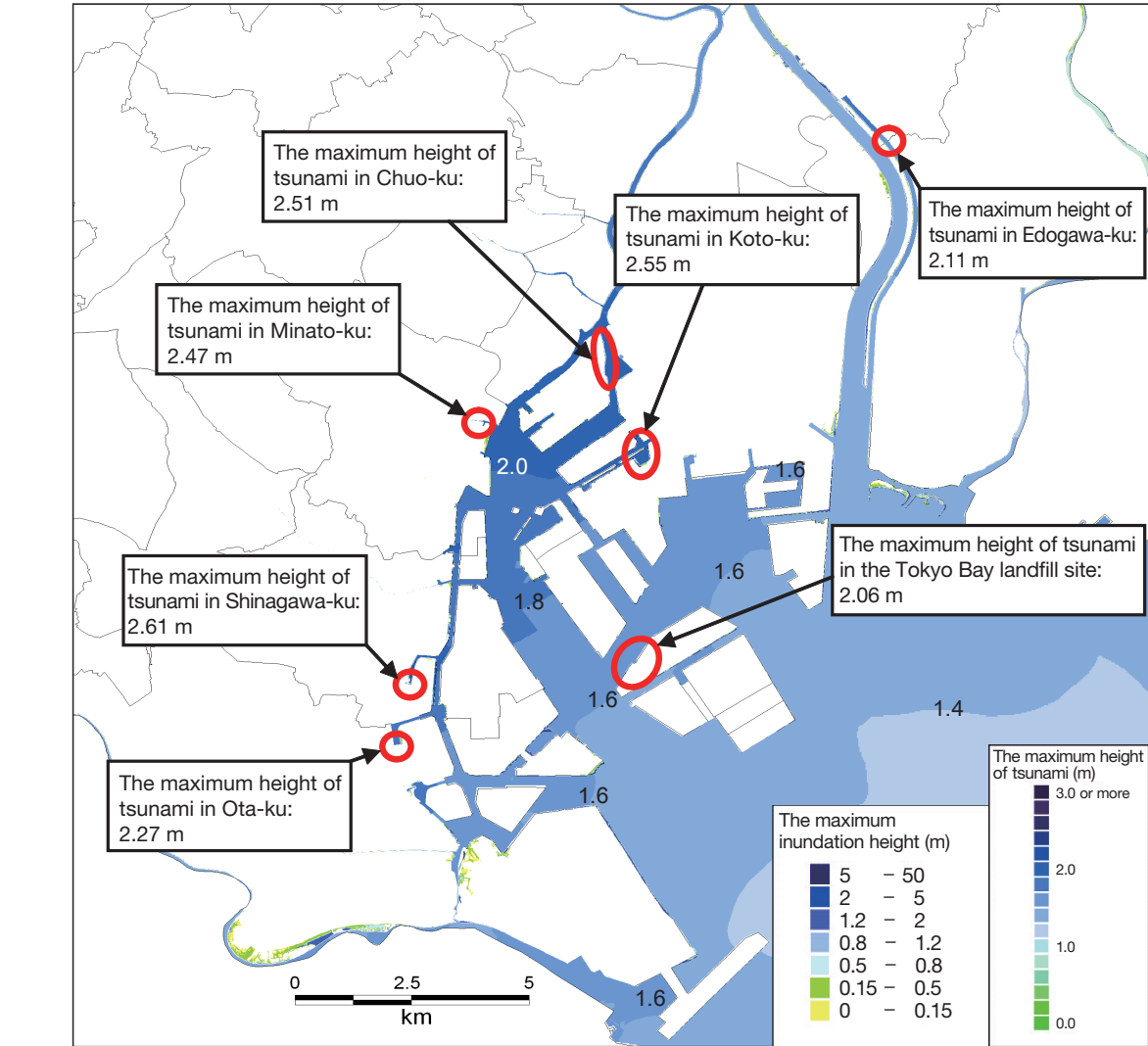
Earthquake occurring in an active fault Tachikawa Fault Zone Earthquake (M7.4)

The surface seismic intensity level is expected to be 7 in the area centered on Tachikawa City. The Tama area will experience level 6-upper over a wide area, however most areas in the Tokyo wards will experience level 5-upper.



(C) Tsunami Damage Estimate due to the Genroku Type Kanto Earthquake

The simulation results of a tsunami caused by a Genroku Type Kanto Earthquake show the maximum height of a tsunami in the Tokyo Bay coastal areas is T.P. +1.9 m to + 2.6 m in which the crustal movement was taken into consideration. The arrival time of the maximum wave height is about 2 hours and 20 minutes at the earliest. The area inundated with water in the entirety of Tokyo when floodgates are closed is small as it is approximately 4.8 km² and the main inundated locations will be waterside river beds.



Genroku Type Kanto Earthquake (M8.2) (A model by Namegaya et al. (2011))/The Maximum Height of Tsunami and the Maximum Inundation Height when Floodgates are Closed

② Major Nankai Trough Earthquake

(A) Damage Estimate

Japan recognizes the importance of specific preparations for a major Nankai Trough earthquake, and in particular of rapidly reinforcing the possible preparations centered on tsunami countermeasures. Based on this recognition, damage estimate results were announced in August 2012.

Tokyo conducted a detailed damage estimate for the minor islands which were expected to suffer severe damage in the national damage estimate results, and this estimate was announced in May 2013. A summary of the estimate results is shown below.

Summary of seismic damage

			Major Nankai Trough earthquake (*)		Genroku type Kanto earthquake (M8.2)	
			Winter, daytime	Winter, nighttime	Winter, daytime	Winter, nighttime
Casualties	By cause	Total deaths by cause	1,332	1,774	90	165
		Quake-related shaking	9	10	9	10
		Tsunami	1,323	1,764	81	155
	By cause	Total Injured	63	90	78	100
		(Severely injured)	(19)	(29)	(8)	(11)
		Quake-related shaking	20	25	74	90
Property Damage	By cause	Tsunami	43	65	4	10
		Total Buildings Damaged	1,282		294	
		Quake-related shaking	122		171	
		Tsunami	1,160		123	

* A major Nankai Trough earthquake is one which would cause maximum damage to Tokyo. The surface seismic intensity estimate is for M9.0 and the tsunami estimate is for M9.1.

(B) Distribution of Seismic Intensities

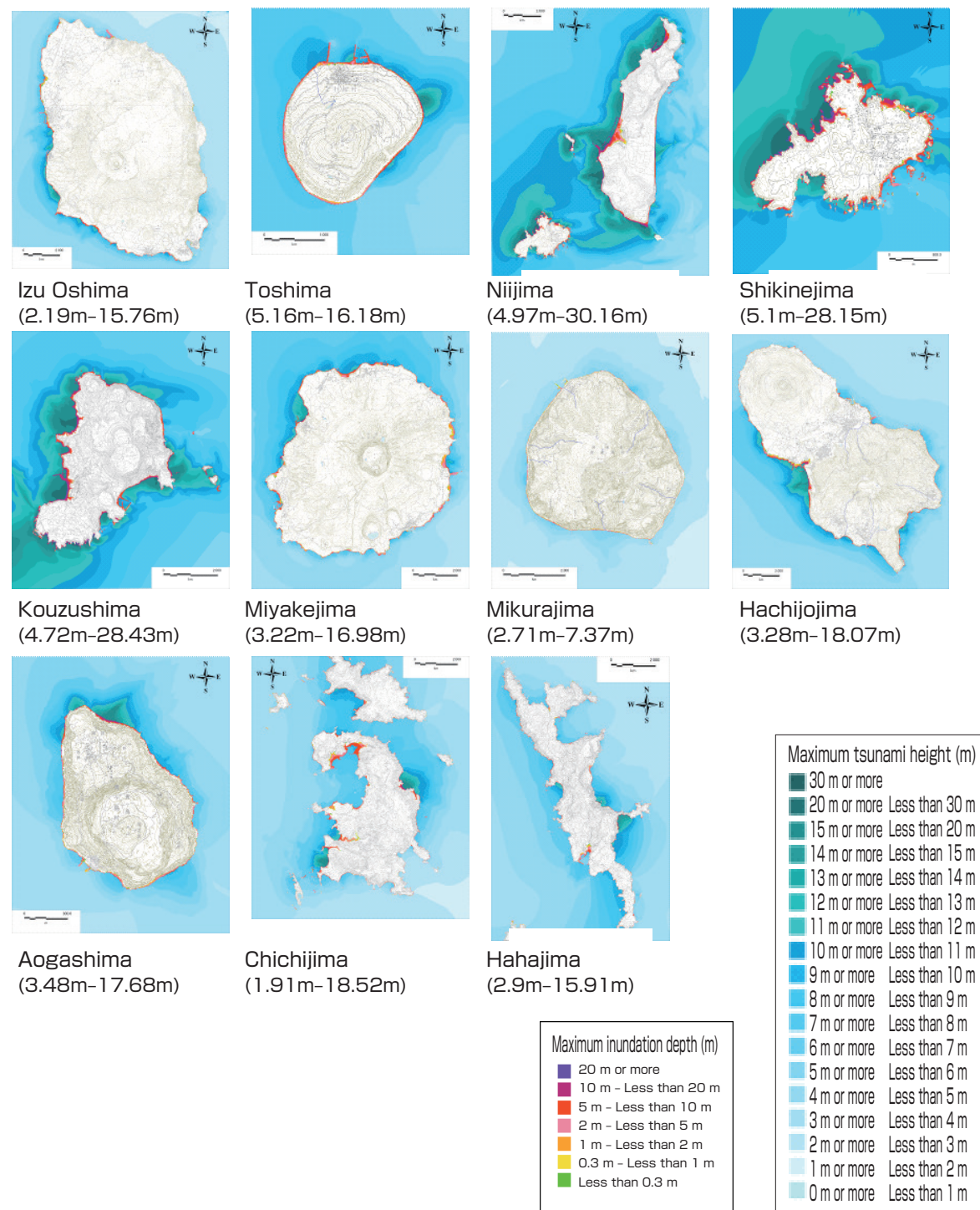
The following explains the distribution of seismic intensity during a Nankai megathrust earthquake. Some parts of the Izu Islands are expected to experience seismic intensity of 6-lower, while nearly all other areas should experience between a 3 and 5-upper. Seismic intensity in the Ogasawara Islands is expected to be less than 1.

In nearly all parts of the Tokyo wards and Tama area, the seismic intensity is expected to be from 5-upper to 5-lower, and the intensity is expected overall to be less than in the case of an earthquake directly hitting Tokyo.

(C) Tsunami Damage Estimate Due to a Major Nankai Trough Earthquake

The results from a simulation of the tsunami caused by a major Nankai Trough earthquake show that severe damage is expected, including a maximum tsunami height of T.P. +30.16 meters in the minor islands estimated with consideration for movement of the Earth's crust. In order to reduce the damage, it will be necessary to evacuate rapidly following the earthquake.

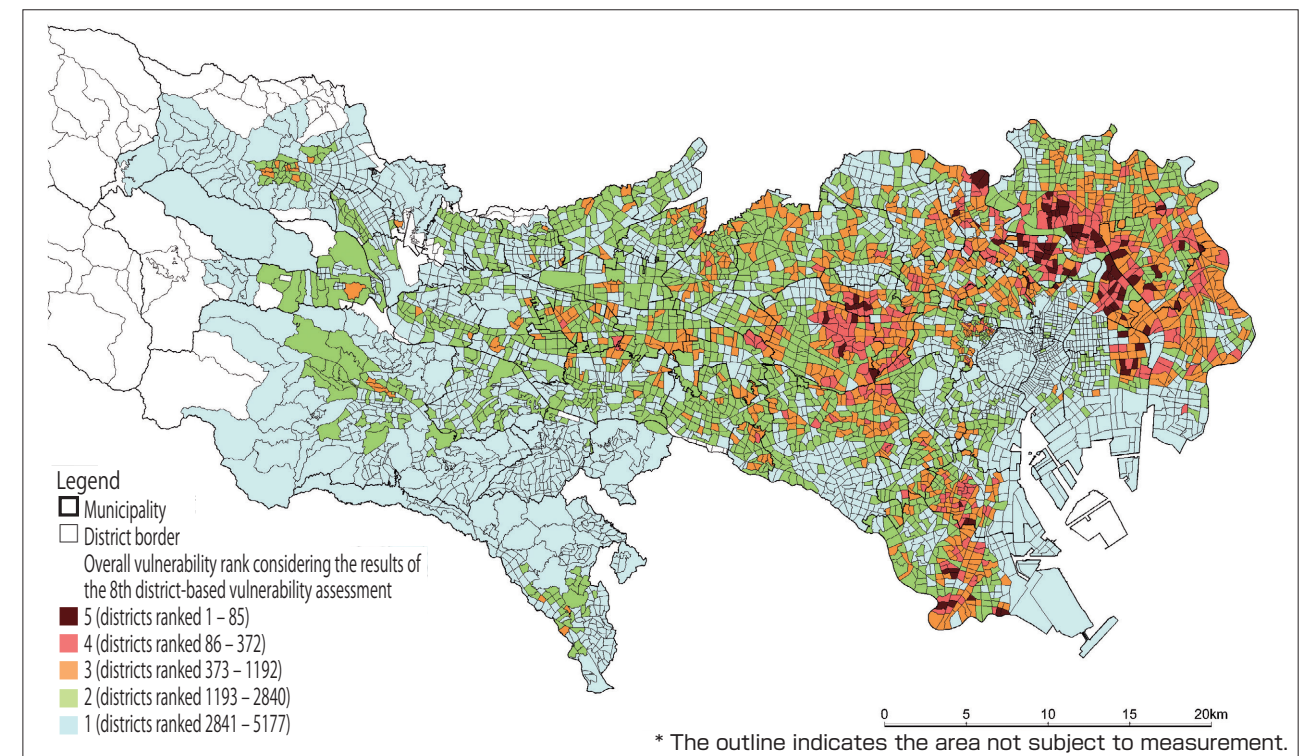
The maximum tsunami height at the Tokyo coast is expected to be T.P. +2.48 meters smaller than in the case of a Genroku type Kanto earthquake. The measures taken to prepare for other earthquakes will also serve as preparation for a major Nankai Trough earthquake.



District-Based Earthquake Vulnerability Assessments

In accordance with "the Metropolitan Earthquake Disaster Prevention Ordinance (currently the Metropolitan Earthquake Disaster Management Ordinance)," TMG has conducted a series of district-based earthquake vulnerability assessments about every 5 years, since November 1975, when the first assessment result which covered the wards was published. The results of the eighth report were published in February 2018. In the assessment, 3 types of vulnerabilities are measured: structural vulnerability, fire vulnerability, and general vulnerability; and on a scale of 1 to 5, each of Tokyo's small community units is evaluated.

The overall danger level is assessed based on the degree of difficulty of carrying out activities following an earthquake.



Relationship Between Damage Estimation and District-Based Vulnerability

Damage Estimate in Tokyo Due to an Earthquake Directly Hitting Tokyo	District-Based Vulnerability
Damage is estimated under hypothesized conditions such as the most frequent earthquake type and the most vulnerable season, time, and weather.	Rather than focusing on a single region, the vulnerability of all of Tokyo's small community units are compared, if equally hit by an earthquake of a particular size.

For details, please look at http://www.toshiseibi.metro.tokyo.jp/bosai/chousa_6/home.htm

Tokyo Liquefaction Hazard Map

The Tokyo Liquefaction Hazard Map which was created in FY1986 had been reviewed since FY2011, and a new hazard map was released in March 2013.

You can look at the Tokyo's Liquefaction Hazard Map from the following address.

<http://www.kensetsu.metro.tokyo.jp/jigyo/tech/start/03-jyouhou/ekijyouka/index.html>

The Tokyo Liquefaction Hazard Map was a guide created with the aim of indicating the probability of the occurrence of ground liquefaction and it is different from those that estimated the damage caused by specific earthquakes.

(2) Damage Caused by Wind and Rain

Current Situation

As an average of the past 30 years, approximately 26 typhoons occur yearly in the areas surrounding Japan and cause damage across the country due to the strong winds and heavy rain.

TMG has steadily implemented measures including modifying river routes, establishing reservoirs, and developing floodwalls, thus achieving a significant reduction in damage.

Urban Flooding

In metropolitan Tokyo, it becomes difficult for rainwater to seep underground due to the progression of urban development, and it tends to intensively flow into rivers in a short period of time. Additionally, intense rainfall with precipitation exceeding 50 mm/hr occurs frequently, which is said to be caused by global warming, heat-island effect, etc. and causes urban flooding due to small and medium-sized river flooding.

Damage by Torrential Rain

In September 2005, Typhoon No. 14 and the autumn rain front caused torrential rain with precipitation of 100 mm/hr. in the western wards area. The Kanda River, the Myoshoji River, and the Zenpukuji River flooded, causing damage to about 6000 buildings in Suginami-ku, Nakano-ku, etc.; the Disaster Relief Act was applied.

Damage Caused by Typhoons

In October 2013, as Typhoon No. 26 approached, Moto-machi in the Oshima-machi district experienced torrential rain of 122.5 mm per hour and 24-hour rainfall of 824.0 mm, both of which are the highest figures ever recorded in the history of observation.

This rainfall caused large-scale landslides in the Moto-machi, Senzu, Okada, and Habuminato areas, causing a large number of casualties. Extensive damage was also caused to buildings, roads, lifelines, and other structures. The landslides were subsequently declared a catastrophic disaster by the government. Casualties in the Tokyo area caused by this typhoon were 40 persons dead or missing and 25 persons injured. (Of these, 39 persons dead or missing and 22 persons injured were in Oshima-machi.)



Torrential Rain in Suginami and Nakano Wards September 4, 2005

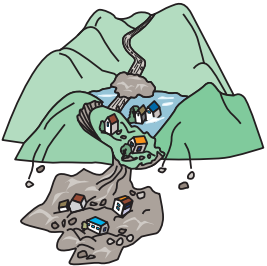


- Typhoon: A typhoon is a tropical low-pressure system of which the maximum wind speed is about 17 m/s or more among the tropical low-pressure systems developing in the north-western Pacific Ocean or the South China Sea.
- Storm surge: An offshore rise of water due to a typhoon or a strong wind. When the water level rises above the floodwalls, coastal areas and downriver lowlands may be flooded.
- Torrential rain: Concentrated heavy rain for several hours in the same location, resulting in a rainfall of 100 mm to several hundred millimeters, often involving heavy rain and thunder, lasting for many hours at any time of the day.

Disaster-Prone Locations

Caution is required in the following areas of Tokyo.

- For storm surges: Lands near a shoaling beach, at the end of a bay, or at the mouth of a river, coastal lands near sea level
- For floods: Alluvial (low-lying) plains and riverbanks
- For landslides: Reconstructed lands, alluvial fans, mountainous regions



(3) Volcanic Eruptions

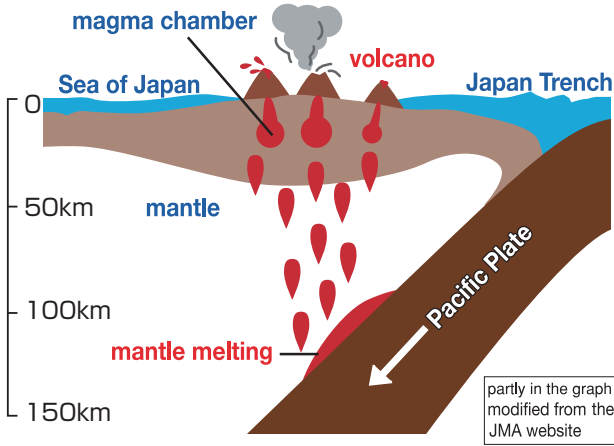
Mechanism of Volcanic Eruptions

A volcanic eruption, like an earthquake, occurs as a result of tectonic plate and mantle activities of the earth.

Volcanoes are generally found near tectonic plate boundaries (along a submarine trench, ridge, etc.), and at hotspots* in the interior of plates. For volcanoes in Japan, magma reaches the surface as rocks from the upper mantle, molten by fluids from the subducted oceanic plate, and rises and collects in magma chambers.

An eruption occurs when the volcanic crater opens and the gas pressure of the magma decreases, in turn producing gas bubbles and increasing the volume of the magma, which is forced to gush out. When the amount of gas bubbles is small, the magma gushes out as a lava flow.

*Places scattered inside the plates where magma springs up from the Earth's deep mantle.



Volcanoes in Tokyo

There are 21 volcanoes in Tokyo, out of the 111 nationwide. All of them are located on its islands; there are 8 volcanic islands which are inhabited. (Izu Oshima, Toshima, Niijima, Kouzushima, Miyakejima, Mikurajima, Hachijojima, Aogashima)

The most active among them in particular are Izu Oshima and Miyakejima. In the past 100 years, Izu Oshima has had three eruptions, at 36- to 38-year intervals, and Miyakejima has had four eruptions, at 17- to 22-year intervals. Cinders, volcanic ash, lava flows, and volcanic gases have caused direct and indirect damage, often necessitating evacuation.



Izu Oshima Eruption, 1986, photographed by Katsumasa Abe, University of Tokyo

Erupted year/month	Location	Summary
Nov. 1986	Izu Oshima	1. A volcanic tremor was detected in the summer. 2. A flow of lava occurred from the crater at the peak to the bottom of the caldera. 3. Fissure eruption, lava fountain, and lava flow occurred on the caldera floor. Fissure eruption also occurred outside the outer rim and the stream of lava flowed into the area close to the inhabited area. 4. All residents (approx 10,000 people) were evacuated out of the island for about a month.
Jul.-Aug. 2000	Miyakejima	1. There was an eruption from the peak; a caldera formed. 2. Cinders and ash were produced. 3. A low temperature pyroclastic flow was generated. 4. A large amount of volcanic gases was emitted. 5. All residents (approx 3,800 people) were evacuated out of the island for about 4 and half years.



Miyakejima Eruption, 2000, photographed by Keiji Takeiri

2. Routine Preparations

(1) Preparation at Home

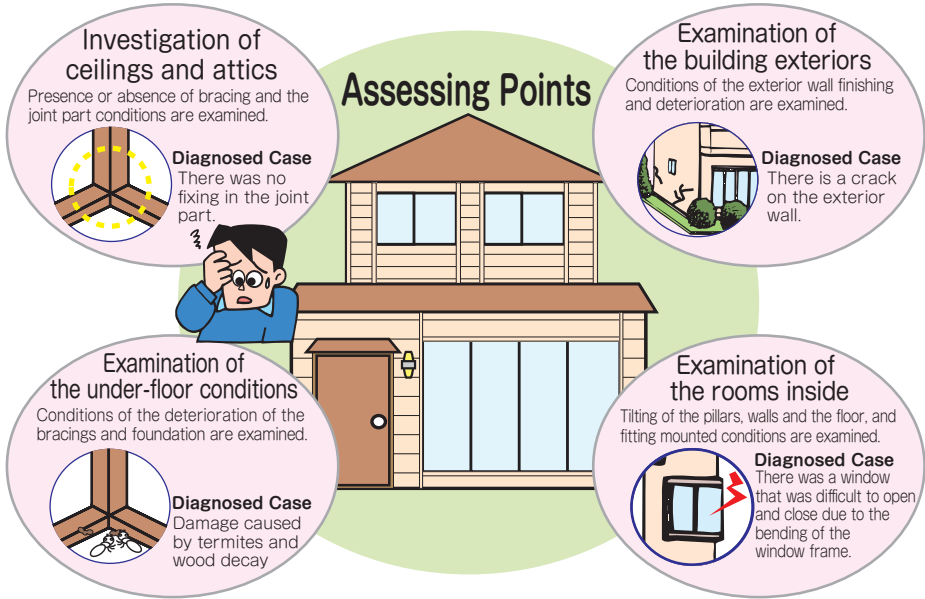
In order to save your family's and your own life in the event of an earthquake, it is important to make the buildings quake resistant, to secure safety inside buildings, and to take appropriate action.

To do so, it is important that you acquire correct knowledge on earthquakes and make various preparations on a regular basis.

1. Conduct a safety check of your house

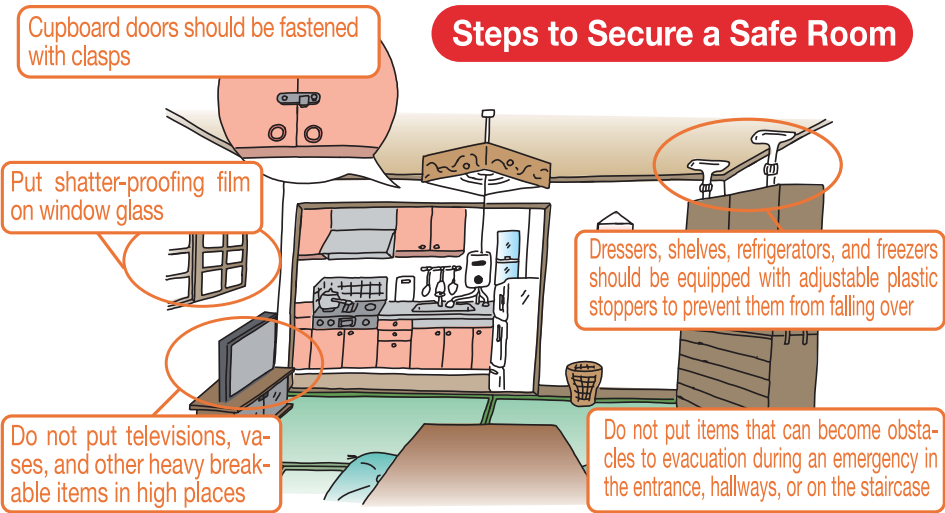
Approximately 90% of the deaths that occurred in the Great Hanshin-Awaji Earthquake were due to being crushed in building collapses. Structures built before the introduction of new earthquake-resistance standards in the Building Standards Act (that took effect on June 1, 1981) are said to be less safe in the event of major earthquakes. To check your building's seismic resistance, a seismic diagnosis is in order, followed by seismic repairs if necessary.

[Earthquake resistance assessment]



2. Conduct a safety check of rooms

- (1) Secure furniture and home appliances that could fall over or move around.
- (2) In storage closets, put heavy items on the bottom, light items on the top, and fasten the doors with a latch.
- (3) Apply shatter-prevention film to glass panels.
- (4) Keep slippers, exercise shoes, and work gloves close at hand in case you must walk through shattered objects.
- (5) Always keep doorways and exits free of clutter.



- (6) If you live high off the ground (about the 10th floor and above), take measures to prevent furniture from being moved by long-period ground motion and measures against large, slow swaying.

Some local governments provide assistance with earthquake resistance assessment and earthquake resistance reinforcement and introducing and installing devices to prevent furniture and appliances from falling over. For the municipal government contact information, please refer to page 63.

3. Please decide several ways to confirm safety
(Please refer to page 23 for details).

4. Prepare a stockpile of daily necessities

It is important to keep a constant stockpile prepared at home of essential everyday items (Please refer to page 48 for details).

- (1) Prepare, at least, a three-day supply of food and water.
- (2) For the anyone who takes medicine, prepare at least three days supply of medicine.
- (3) Always make sure to regularly test your batteries and check your food to make sure they still work or are edible, and are easy to find, even by rescuers.



5. Always keep your car's fuel tank full.

In the event of a large-scale disaster, such as an earthquake directly below Tokyo, you may not be able to refuel your car. If you have a car, keep the following 3 things in mind in case of a disaster. Preparation may save your life.

- (a) Always be aware of what to do when a disaster occurs.
- (b) You may not always be able to refuel your car during a disaster.
- (c) Refuel before your fuel tank is less than 1/2 full.



(Sample image)

Section 1 Introduction

Section 2 Preparation for Natural Disasters

(2) Preparation at Work

The “TMG ordinance covering measures for stranded persons” was enacted in April 2013.

TMG would like business establishments to store water and food for three days in order for the employees to stay in the facilities and to try to protect users at stations and customer facilities.

For more details about the ordinance, please refer to page 40.

Disaster Management Plan for Your Business

Regardless of their usage or scale, all business premises in Tokyo must have an independent disaster preparedness plan according to the Metropolitan Disaster Management Ordinance. For details on how to prepare a business premises disaster preparedness plan and so on, contact your local fire station.

Type of Workplace			Workplace Disaster Preparedness Plan Creation Instructions	Notification to fire department
Ordinance Article 10 Affected Workplace	General workplace	Workplaces stipulated in Article 36 of the Fire Service Act, which are required to select a disaster preparedness manager	Determine the required items from the items that should be prescribed in the workplace disaster preparedness plan that is part of the fire prevention plan related to disaster preparedness management.	Required
		Workplaces stipulated in Article 8 of the Fire Service Act and Article 55-3 of the Fire Prevention Ordinance, which are required to select a fire prevention manager	Determine the items that should be prescribed in the workplace disaster preparedness plan that is part of the fire prevention plan related to disaster preparedness management.	Required
		Workplace other than the above (small-scale workplace)	Create an independent workplace disaster preparedness plan.	Not Required
	Workplace containing hazardous materials	Dangerous facilities stipulated in Article 14-2 of the Fire Service Act, which are required to create preventative rules	Determine the items that should be prescribed in the workplace disaster preparedness plan that is part of the preventative rules.	Required
		Dangerous facilities other than the above	Create an independent workplace disaster preparedness plan.	Not Required
Article 11 Affected Workplaces	Business premises that are required to appoint a disaster prevention manager should create a fire defense plan that combines those relating to disaster management and fire management, and this should stipulate the items that need to be prescribed in the business premises disaster preparedness plan.		Determine the items that should be prescribed in the workplace disaster preparedness plan as a designated public institution.	Required

* Business premises that are required to appoint a disaster prevention manager should create a fire defense plan that combines those relating to disaster management and fire management, and this should stipulate the items that need to be prescribed in the business premises disaster preparedness plan.

* Business premises that need to prepare both a fire defense plan and preparedness regulations should prescribe the items that need to be covered by the disaster preparedness plan in the fire defense plan and preparedness regulations.

In accord with the fact that there were many stranded people at the time of the Great East Japan Earthquake, please determine the countermeasures for stranded persons in your workplace disaster preparedness plan.

Business operators should stipulate the control of employees returning home all together, ensuring of lines of communication for safety confirmations, storing a three day supply, rules on returning home during a disaster and so on, in the workplace disaster preparedness plan and be prepared for the an earthquake directly hitting Tokyo.



(3) Local Area Preparation

Lessons Learned from the Great East Japan Earthquake

Just as the self-help and mutual assistance provided by the people living in the area affected by the Great East Japan Earthquake were a great force for good during the disaster, it is important for people close by to help each other and for the nearest neighbors to help each other.

For this reason, let's make preparations in advance and conduct training on a routine basis so that the disaster preparedness related departments in the TMG and the local governments, volunteer fire companies, citizens disaster response team (volunteer disaster preparedness organizations), and other groups involved with local disaster preparedness can strengthen their mutual cooperation system to conduct the initial firefighting, rescue, relief, and evacuation activities during a disaster.



Routine Preparation

1. Strengthen interaction with the local community

- (1) Strengthen interaction with the local community by actively participating in the activities of the neighborhood association and training by citizens disaster response teams.
- (2) Having the elderly and disabled regularly participate in disaster preparedness activities helps the people in the local community understand that these people are limited in what they can do for themselves, and thus build the relationships necessary to provide aid to these people in an emergency.



2. Disaster Preparedness Civic Organizations

Disaster preparedness civic organizations are organizations that effectively take disaster preparedness measures for their local communities to “protect our community ourselves” through the mutual cooperation of local people.

Let's increase the awareness of each resident in the local community, utilize the organizational capabilities and power of businesses, and participate in a variety of activities in the local community to improve the disaster preparedness of neighborhood organizations which are responsible for mutual assistance within the community, and increase our capability for self-help and mutual assistance.



Activity examples: providing disaster prevention information, disaster prevention patrol and inspection, holding disaster drills, disaster measures: (PR, firefighting, rescue, evacuation guidance, food and water distribution, etc.)

* In addition to the above, Citizen Organizations for Disaster Prevention can make a plan for local districts to deal with a disaster according to their actual circumstances, and suggest implementation to local governments. Make disaster response plans in order to enhance the abilities of communities to respond with mutual support.

3. Volunteer fire companies

In the event of fire, civilian firefighters are those who volunteer to take part in fire fighting activities with a mission to “protect my city with my own hands” in cooperation with the firefighting department while engaging in work, study, housework, etc. In addition to firefighting, they will also be involved in lifesaving and rescue activities in the event of a disaster.



At normal times, the volunteer fire company members conduct firefighting and disaster prevention drills in their local communities to increase disaster prevention capabilities, including disseminating information on first-response fire fighting and first aid. For this reason, in addition to the male membership, many female volunteer fire company members play active roles.

In addition to being paid as part-time specialist local civil servants, members may also receive compensation for uniforms, any injuries incurred during their activities in public disasters, as well as through various award programs.

Volunteer fire companies comprise individuals of both genders, various ages and different occupations, such as company employees, self-employed persons, students and homemakers. Anyone living or working in the volunteer fire company's jurisdiction that is age 18 or older is eligible to join.

(Entry qualifications vary depending on the ward or municipality.)

3. Response During a Disaster

When an earthquake occurs, the most important objective is protecting your own life. Next, avoiding injury is important. When you feel the tremors of an earthquake, your first priority is your own safety.

10 Tips for Earthquake Safety

10 Tips for Earthquake Safety

When you Feel A Quake Or Hear The Emergency Earthquake Warning...

1. Quake! Protect Yourself First!

- Be prepared and protect yourself from an earthquake when you hear an earthquake warning announcement or feel a quake.
- Stay under a large table until the quake has stopped. Keep yourself safe from falling or moving objects during a quake.



High-rise Buildings with 10 or more floors

- Upper floors may be shaken for several minutes.
- Large, slow shakes may cause the furniture fall down or move across the room.

Right After An Earthquake

2. Keep Calm. Check All Fire Sources. Put Out Fires Quickly.

3. Keep Calm, Panic May Cause You Injuries.

- Be careful of furniture which has tipped over or fallen indoors, and also of glass shards and similar dangers.
- Do not rush outside, as roof tiles, window glass, signs, and other objects will be falling.



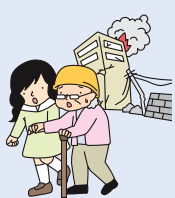
4. Make Sure You Have Ways Out: Open Doors And Windows

5. Keep Away from Gateposts and Walls.

After An Earthquake

6. Stay Away From Fire And Tsunami

- Take refuge in a temporary assembly spot or an evacuation area when a fire may threaten your life in the community.
- Leave the coast as soon as possible for a higher, safer place when you are hit by a big quake or hear a tsunami warning at the seaside.



7. Get The Right Information. Take The Right Action.

8. Make Sure Your Family And Neighbors Are Safe.

9. Work Together On Rescue And First Aid.

10. Make Sure Electricity And Gas Are Off Before Evacuation.

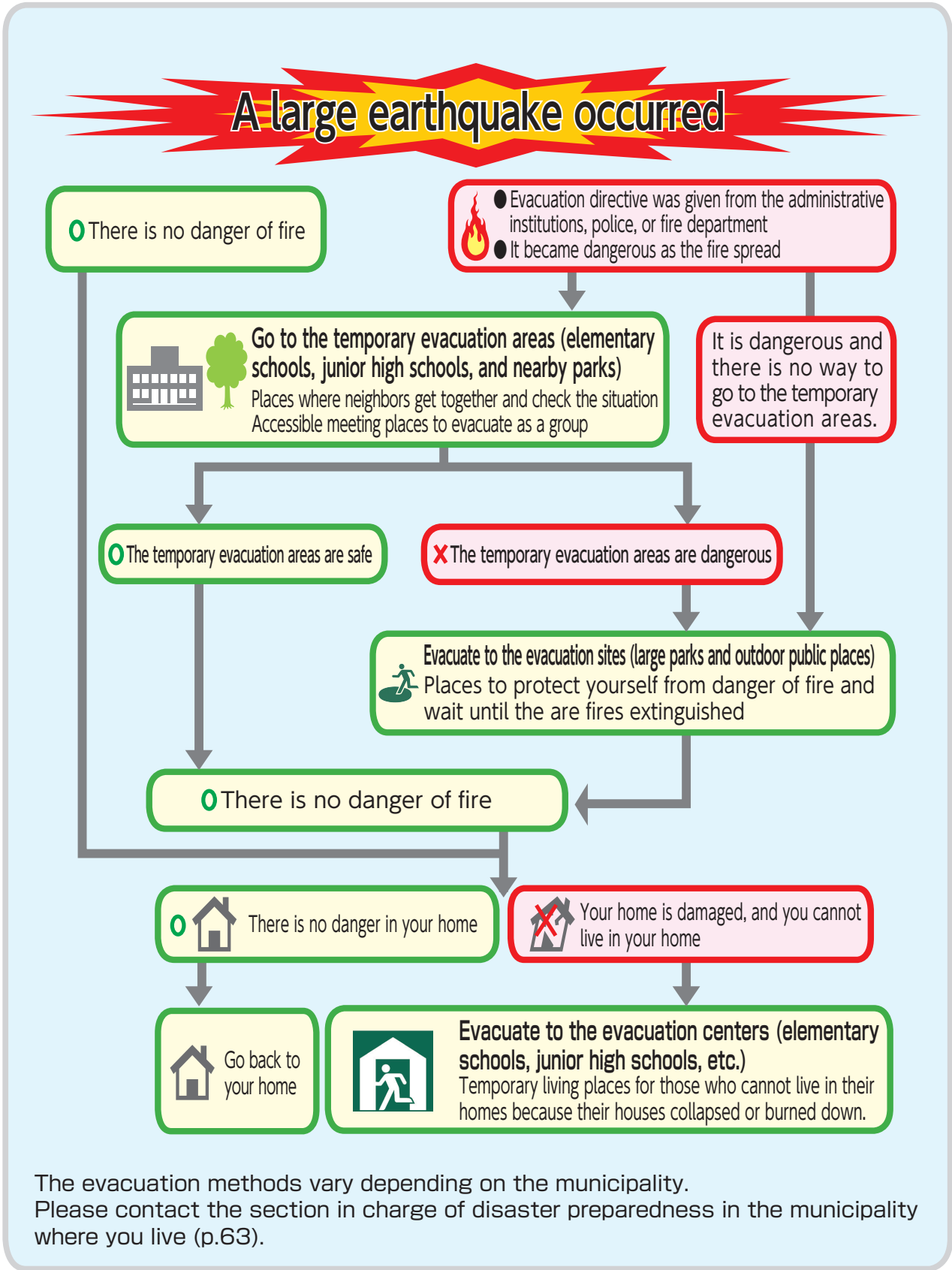
* Based on "10 Tips for Earthquake Safety," issued by the Tokyo Fire Department

Reference Seismic intensity and human experience and behavior

Seismic intensity level	Human perception and reaction
4	Most people are startled. Felt by most people walking. Most people are awoken.
5 lower	Most people are frightened and feel the need to hold onto something stable.
5 upper	Many people find it hard to move; walking is difficult without holding onto something stable.
6 lower	It is difficult to remain standing.
6 upper	It is impossible to remain standing or move without crawling. People may be thrown through the air.
7	

* From "Tables explaining the JIMA Seismic Intensity Scale," Japan Meteorological Agency

Flow of Evacuation



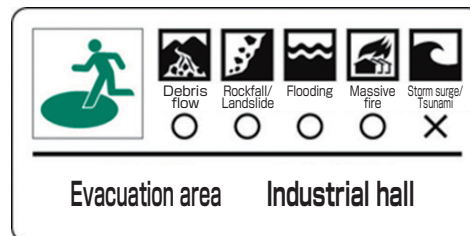
Temporary evacuation areas

This is a place where neighborhood evacuees temporarily gather to check the conditions and form temporary evacuation groups before evacuating to the evacuation area. It is generally the grounds of a school, nearby park, or similar location where there is sufficient space to ensure the safety of the persons gathering there.

Evacuation area

This is a facility or open space such as a large park or public square that residents can evacuate to immediately in order to protect their lives from fires in the wake of an earthquake, inundation caused by storm and flood damage, and other such dangers. Designated evacuation areas are to be specified by disaster type, such as earthquake, tsunami, inland flooding, etc. by the municipal authorities. The above is a description of designated emergency evacuation sites based on the Basic Act on Disaster Management

You can check the locations of designated evacuation areas on the Tokyo Disaster Prevention Maps on the websites of each ward or municipality or on the Tokyo Disaster Prevention website. See more about the Tokyo Disaster Prevention Maps on page 24.



<Reference: Hazard Specific Evacuation Guidance Sign System (JIS Z 9098)>
Evacuation Area Sign Description Examples

Evacuation Center

1. What is an evacuation center?

- (1) It is a place to temporarily accept and protect the affected citizens whose homes collapsed or burned down due to an earthquake or the citizens who may actually suffer damage, and public facilities, etc., are designated as evacuation centers by the municipal authorities.
- (2) Often, the neighborhood elementary schools and junior high schools are designated as an evacuation center.
- (3) Medical care stations are set up in evacuation centers above a set number of people in size (about 500 or more people).
- (4) Evacuation center medical care stations have doctors, nurses, and others on standby to provide medical consultation, first aid, and simple medical care.
- (5) When the medical need exceeds the capability of the medical care stations, the person is relocated to a medical organization that can provide the needed care.
- (6) Public health nurses and others will make rounds visiting the evacuation centers to offer health consultations.

2. What is a social welfare institution evacuation shelter?

- (1) It is a social welfare facility or other facility that was designated in advance for temporarily accepting and protecting persons who require special assistance with living at home or in an evacuation center.
- (2) A social welfare institution evacuation shelter refers to a building that is not only earthquake and fire resistant and steel framed, but also one with a barrier free design taking into account the needs of vulnerable people.

3. To check the location of evacuation centers:

You can check the location of evacuation centers on the Disaster Prevention Map on the respective municipal websites and the TMG Disaster Prevention website. For details of the Tokyo Disaster Prevention Map, please refer to page 24.

4. Let's help each other while living in the evacuation center.

- (1) Life in the evacuation center is jointly run by the staff and the self-governing evacuees.
- (2) Let's follow the rules, divide up duties as much as possible, and help each other while living there.

Disaster prevention parks

These are municipal parks designated as an activity base for countermeasures against large earthquakes, and are used as evacuation areas and for rescue and relief units. Disaster prevention parks are equipped with lighting power sources such as solar power generation, disaster toilets connecting to underground toilet tanks, and wide roads to enable easy access by emergency vehicles.



4. Support for Persons Requiring Special Assistance

Persons who require special assistance are persons who are unable to smoothly and quickly carry out activities such as obtaining information, evacuating, and securing the means of living in the event of a disaster. There is also a risk that social assistance and other services which these persons previously used may be limited during the period of recovery after a disaster.

Therefore it is important to keep the principles of self-help and mutual assistance in mind, and to sufficiently prepare in advance according to the circumstances of each individual. This will reduce fear in the event of a disaster, and also prepare the conditions which will allow assistance to be more easily obtained.

Term Persons requiring special assistance during a disaster

This includes the elderly, disabled, seriously ill, infants, pregnant women and foreigners among others.



Routine Preparation

1. The elderly, physically disabled, infants and pregnant women, sick and injured people

- (1) Ensuring safety when a disaster occurs
e.g. Ensure rooms are safe, prevent furniture from falling over, prevent glass from shattering, etc.
- (2) Evacuation locations and evacuation methods
e.g. Check in advance by holding disaster preparedness training with your family and neighbors. Decide the methods to check on people's safety.
- (3) Secure the minimum required items for living in an evacuation center or living with assistance, etc.
e.g. Stockpile of emergency items and medicine (3 days' worth; recommended 1 weeks' worth. These items may be difficult to obtain.)

2. Persons with visual impairments

- (1) Preparation for when the familiar road textured block tiles or guidance equipment is damaged
e.g. Check multiple evacuation routes in advance. Ask family members or surrounding people for guidance when affected by a disaster.
- (2) Information gathering method when the usual means, such as television, telephone, radio, or the Internet cannot be used.
e.g. Ask in advance for help from people in the local community and have them check on how you are doing. When a disaster occurs, notify others about visual impairments, and ask surrounding people for information.
- (3) How to seek help if trapped inside your house.
e.g. Carry a whistle, anti-crime buzzer, etc., to call a person outside for help.

3. For people with hearing disabilities and intellectual disabilities

- (1) Countermeasures for the cases when communication cannot be smoothly conducted and requests cannot be informed
e.g. Prepare help cards and emergency contact cards explaining the details of support required in advance and plan necessary matters to deal with.

Cover: Tokyo Metropolitan Government standard format



Backside: Reference format

Please notify the persons below.
My name
(A) Contact telephone No.
Contact organization name (if a company, organization, or similar body)
Name of the individual to contact
(B) Contact telephone No.
Contact organization name (if a company, organization, or similar body)
Name of the individual to contact

- (2) Actions to take when struck by a disaster when away from home, such as at work or school
e.g. Designate a meeting place in advance.

4. For foreigners

Prepare for situations in which there is trouble with communication and clearly stating needs is difficult by having "Help Cards for Foreign Residents", a handbook for foreign residents made by the Bureau of Citizens and Cultural Affairs, available for use.



- 5 types in 12 languages
- Japanese, English, Chinese, South-Korean and North-Korean (written in parallel)
 - Japanese, Vietnamese, Tagalog (written in parallel)
 - Japanese, Thai, Nepalese (written in parallel)
 - Japanese, French, Burmese (written in parallel)
 - Japanese, Spanish, Portuguese (written in parallel)

5. People with mental disorders

Mental disorders vary according to people; therefore, prepare to have the person with a mental disorder and his/her supporters tell the symptoms to others.

6. People with internal impediments

Since it is difficult to identify that the person has a disability, make preparations so the person can inform their medical care and nursing care needs to others.

7. People using artificial respirators at homes

- (1) Securing of items needed for treatment to be prepared for disasters and even electric outage

Assume that the treatment is to be continued at home and secure backup power for the medical device, a resuscitator bag, medical goods, care items, etc. (basically for seven days.)

- (2) Preparations in case evacuation or hospitalization is needed

Securing of moving equipment such as a wheelchair (except for mobility scooter users), stretcher, lifter two-wheeled cart, etc., and supporters (four or more people) Also, discuss the evacuation destination (such as a hospital) in case home care becomes difficult.

- (3) Confirmation of actions to be taken during a disaster

Discuss well and often with supporters on a regular basis (a primary doctor, home-visiting nurse, health nurse, etc.) about the response during a disaster and confirm each person's ability to take specific actions during a disaster.

References: 1. "Guidelines for Manuals for Aiding People that Require Assistance During a Disaster"
2. What You Can Do for Children Before an Earthquake Strikes (For infant guardians)
3. Guidelines for Supporting People Using Artificial Respirators at Homes in Metropolitan Tokyo During a Disaster

(Prepared by the TMG Bureau of Social Welfare and Public Health)

Local Area Disaster Preparedness Measures

1. People requiring assistance

Actively work to create a place where you can meet your neighbors, so that they can learn about any assistance you may need.

You can also expand the circle of cooperation in your area by participating in disaster drills.

2. For neighbors and other people in the local community

Proactively interact on a regular basis with people in your local community who are elderly, have disabilities, or have other difficulties; accurately gather necessary information in advance; and prepare a support structure so that people with difficulties like these will not hesitate to ask for assistance in the event of an emergency.

Please strive to take these people's varying needs into consideration and regularly talk with them, offering them assistance.

Some people with invisible or difficult-to-notice disabilities or difficulties may wear a "Help Mark" or a "Maternity Mark" on their bodies to let others around them know of their condition. Please give consideration to people wearing these marks.



Maternity Mark Help Mark



5. Information for Use in Emergencies

(1) How to Check that Family Members and Others are Safe

In a disaster, ordinary telephones will be overwhelmed and it will be difficult to make a call. You should prepare multiple means of checking on the safety of family members and others in advance.

Trial experience is available!

- 1st and 15th of each month
- January 1st to 3rd
- Disaster Preparedness Week (August 30th to September 5th)
- Disaster Preparedness and Volunteers' Week (January 15th to 21st)

Leave or Listen to voice messages over the phone

Disaster Emergency Message Dial (171)

1. Dial 171
2. Press 1 for recording and 2 for playing
3. Press the destination telephone number from the area code
4. Record or play message

Disaster Voice Message Service

When you enter the mobile phone number of your family member from your mobile phone, smartphone, etc. the message you recorded will be transmitted to the mobile phone of your family. (Method of use is specific to each mobile phone carrier.)

If you want to transmit and check written messages;

Disaster message boards web 171

1. Access "web 171" on the Internet.
2. Enter a predetermined phone number (You can enter the numbers of a fixed phone, an IP phone, a mobile phone and PHS.), and register and check safety messages.

SNS (Social Network Services)

You can let your family and friends know you are safe just by posting your status (I'm safe!) on SNS including Twitter, Facebook, and LINE.

Disaster Message boards by mobile phone carriers

A disaster message board service is provided by mobile phone carriers. Messages can be registered from the site of your mobile phone carrier. Messages of other carrier's numbers can be also searched and checked.

Smartphone Apps Useful in Times of Disaster

Download them and get used to using them.



NTT docomo



au



softbank

Google Person Finder

1. Access "Google Person Finder" on the internet.
2. After entering the name, you can register and search for safety information.






J-anpi

You can collectively search for safety information provided by various disaster message boards, news media and companies.

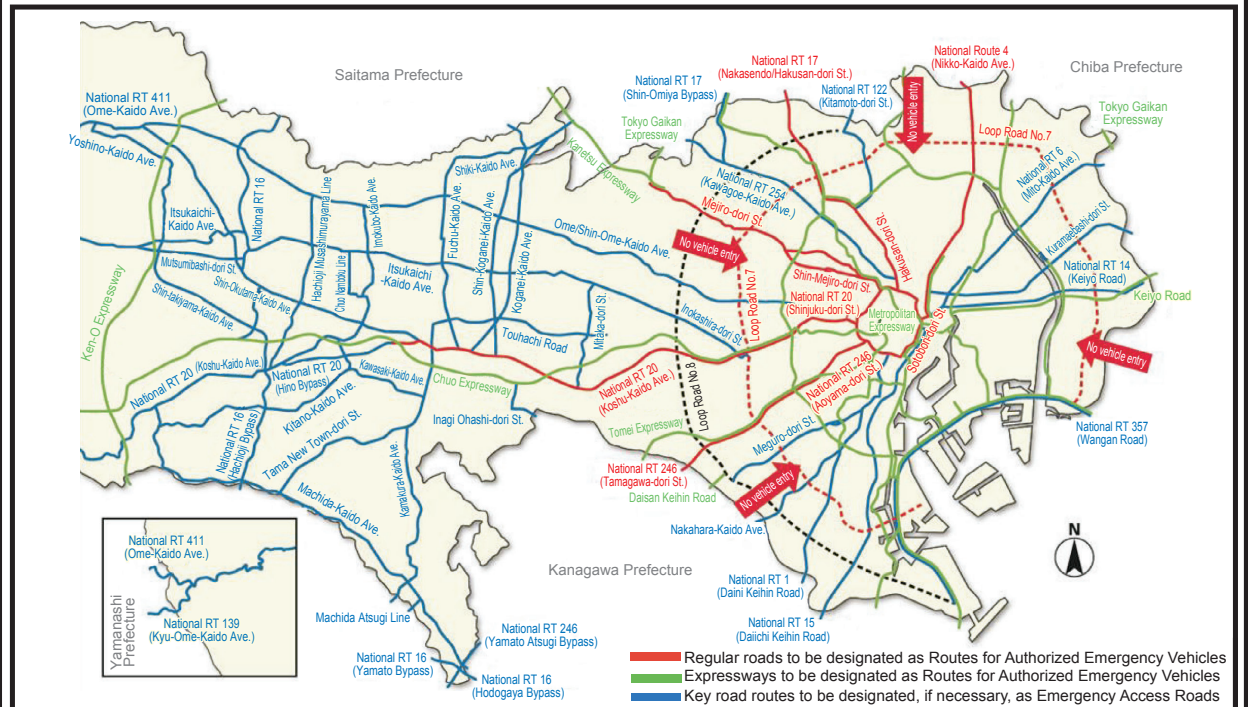
1. Access "J-anpi" on the Internet.
2. Search with a phone number and a name.



The sticker at left indicates shops which have concluded a cooperation agreement.

Icon	Facility name	Example	Function
	Temporary shelter	Tokyo Metropolitan Government facilities	Facility which temporarily accommodates stranded persons
	Evacuation center	Elementary schools, junior high schools, community centers, etc.	Places where persons who have lost their homes can live temporarily
	Evacuation areas	Parks, housing developments, universities, etc.	Places where people can evacuate to in order to escape from the danger of fire
	Support stations for those attempting to return home during a disaster	Convenience stores, fast food restaurants, family restaurants, etc.	Locations where tap water and toilets are available and where people can get information
	Disaster support stations	Gas stations	

After an extremely large earthquake occurs, in order to prevent danger on the road while ensuring the smooth passage of emergency vehicles for lifesaving and firefighting activity, traffic regulations (primary traffic regulations) shall be implemented based on the Road Traffic Law. After that, in order to ensure that disaster response can be implemented accurately and smoothly, emergency vehicle priority routes shall be secured (secondary traffic regulations) based on the "Disaster Counter - measure Fundamental Law."



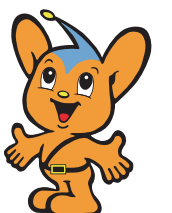
In order to avoid traffic disruption in the city center, if necessary, vehicles will be prohibited
loop 8 will be restricted.

massive earthquake (of an intensity 5-upper or greater).

TMG will restrict traffic (as stipulated in "the Road Traffic Law") upon a massive earthquake (of an intensity 5-upper or greater).
In order to avoid traffic disruption in the city center, if necessary, vehicles will be prohibited from merging toward the city center on Loop 7, and the number of vehicles merging toward the city center from Loop 8 will be restricted.

Tokyo Metropolitan Police Department (TMPD)

If you are not already on the road, please do not start driving your car after a strong earthquake (intensity 6-lower or greater) occurs.



(4) List of Emergency Water Supply Stations

To prepare in case of a long-term water outage due to the waterworks facilities being damaged by an earthquake or suffering from a power outage TMG has established emergency water supply stations at about 2 kilometer radius intervals. These emergency water supply stations consist of water purification plants, water supply stations, and emergency water tanks (facilities to provide drinking water after an earthquake), and emergency water tanks will be placed in parks, TMG school grounds, and other locations that are serving as evacuation area. For details, please refer to the Bureau of Waterworks website. <http://www.waterworks.metro.tokyo.jp/eng/hte/shinsai/ichiran.html>



This mark indicates a water station accessible during a disaster.

List of Emergency Water Supply Stations (Water Supply Points) Current as of April 1, 2019

1. Water supply points in 23 wards of Tokyo (emergency water storage tanks, purification plants, water supply stations, etc.)

[Established by Bureau of Waterworks] (m³)			
No.	Municipality	Facilities	Address
1	Chiyoda-ku	Togo Gensui Memorial Park	18 Sambancho
2		Hibiya Park	1 Hibiya Koen
3		Tokyo Metropolitan Hitotsubashi High School	1-12-13 Higashikanda
4	Chuo-ku	Harumi Water Supply Station	1-6-3 Harumi
5		Akatsuki Park	7-19-1 Tsukiji
6	Minato-ku	Horidome Children's Park	1-1-16 Nihombashi Horidomecho
7		Shiba Water Supply Station	3-6-7 Shibakoen
8		Aoyama Park	7-23 Roppongi
9	Shinjuku-ku	City Heights Katsurazaka (Minato-ku Disaster Prevention Activity Base)	2-13-8 Takanawa
10		Yodobashi Water Supply Station	2-10-1 Nishishinjuku
11	Bunkyo-ku	Tsurumaki Minami Park	507 Waseda Tsurumakicho
12		Hyakunincho Fureai Park	3-28 Hyakunincho
13	Taito-ku	Hongo Water Supply Station	2-7-29 Hongo
14		Kyoikunomori Park	3-29 Otsuka
15	Sumida-ku	Ueno Park	8-51 Ueno Koen
16		Sanyabori Hiroba in Sumida Park	7-1 Asakusa
17	Koto-ku	Bunka Park	1-27-5 Bunka
18		Ryogoku Park	4-25-3 Ryogoku
19	Shinagawa-ku	Kameido Water Supply Station	2-6-50 Kameido
20		Toyoumi Water Supply Station	6-1-8 Toyo
21	Mizuho-ku	Koto Water Supply Station	3-6-17 Shinsuna
22		Ariake Water Supply Location	3-1-8 Ariake
23	Shinagawa-ku	Minamisuna 3-chome Park	3-14-21 Minamisuna
24		Tatsuminori Seaside Park	2-1 Tatsumi
25	Shinagawa-ku	Togoshi Park	2-1-30 Yutakacho
26		Shioji Park	5-6 Yashio
27	Meguro-ku	Tokyo Metropolitan Yashio High School	3-27-22 Higashi-shinagawa
28		Yakumo Water Supply Station	1-1 Yakumo
29	Ota-ku	Rinshinomori Park	5-37 Shimo-meguro
30		Magome Water Supply Station	2-15-6 Nishimagome
31	Ota-ku	Kami-kedai Water Supply Station	1-48-25 Kamiikedai
32		Tokai Water Supply Station	1-3-12 Tokai
33	Ota-ku	Nishirokugo 3-chome Park	3-16-16 Nishirokugo
34		Haginaka Park	3-25-26 Haginaka
35	Setagaya-ku	Tobori Park	1-30 Omori Higashi
36		Shimomaruko Park	4-21 Shimomaruko
37	Setagaya-ku	Onnazuka-nakayoshi Park	5-24 Ikegami
38		Kinuta Purification Plant	2-9-1 Kitami
39	Setagaya-ku	Kinutashimo Purification Plant	2-4-1 Kamata
40		Wadabori Water Supply Station	2-30-43 Ohara
41	Setagaya-ku	Tamagawa Water Supply Station	1-19-1 Tamagawa Den-en Chofu
42		Okura Water Supply Station	2-8-1 Kinuta
43	Setagaya-ku	Komazawa Water Supply Station	2-41-5 Tsurumaki
44		Kodomonohiroba Park	2-31-4 Shimouma
45	Setagaya-ku	Yoshine Park	6-21 Funabashi
46		Soshigaya Park	4-2 Kami-soshigaya
47	Setagaya-ku	Nakamachi 2-chome Park	2-34-1 Nakamachi
48		Yoyogi Park	2-1 Yoyogi Kamazonocho
49	Shibuya-ku	Tokyo Metropolitan First Commercial High School	8-1 Hachiyamacho
50		Kageoka Park	4-19-21 Ebisu
51	Nakano-ku	Yayoi Park	5-4 Yayoicho
52		Egotanomori Park	3-14 Egota
53	Suginami-ku	Mizunoto Park	1-3 Egota
54		Suginami Purification Plant (Note 1)	3-28-5 Zempukui

(Note 1) The operation of Suginami Purification Plant has been suspended since December 28, 2016.

[Established by Bureau of Waterworks] (m³)			
No.	Municipality	Facilities	Address
55	Suginami-ku	Izumi Water Pressure Regulating Place	2-5-23 Izumi
56		Kami-igusa Water Supply Station	3-22-12 Kami-igusa
57		Wadabori Park	2-26 Omiya
58	Toshima-ku	Sanshinomori Park	3-55 Wada
59		Shoei Park	1-12 Takaido-nishi
60		Igusamori Park	4-12-1 Igusa
61	Kita-ku	Mabashi Park	4-35-5 Koenji-kita
62		Zempukui River Green Space	3-14 Narita-nishi
63		Nishi-Ikebukuro Park	3-20-1 Nishiikebukuro
64	Arakawa-ku	Tokyo Metropolitan Bunkyo High School	1-1-5 Nishisugamo
65		Kirigaoka Central Park	1-8 Kirigaoka
66		Takinogawa Park	2-1 Nishigahara
67	Nerima-ku	Kita Athletic Park	2-47-6 Kamiya
68		Minami-senju Water Supply Station	8-2-6 Minami-senju
69		Nippori Minami Park	5-19-1 Higashi-nippori
70	Itabashi-ku	Misono Purification Plant	2-10-1 Misono
71		Itabashi Water Supply Station	1-17-1 Kaga
72		Oyaguchi Water Supply Station	1-4 Oyaguchi
73	Nerima-ku	Johoku Central Park	1-1 Sakuragawa
74		Johoku Park	2-19-1 Sakashita
75		Tokyo Metropolitan Itabashi High School	1-54-1 Oyaguchi
76	Nerima-ku	Akatsuka Park	3-1 Takashimadaira
77		Nishitoku-daini Park	3-42-1 Nishidai
78		Nerima Water Supply Station	2-4-1 Hikarigaoka
79	Nerima-ku	Oizumi Park	6-25 Oizumi-gakuencho
80		Gakuden Park	3-32 Toyotama-minami
81		Hayaichi Park	1-47-11 Hayamiya
82	Adachi-ku	Minnano Hiroba Park	8-41 Shakujimachi
83		Koemon Water Supply Station	3-8-1 Chuo Honcho
84		Adachi General Sports Center	2-27-1 Higashi-hokima
85	Adachi-ku	Senju Sports Park	2-1-1 Senju Midoricho
86		Suwagi-Higashi Park	3-25 Nishiarai
87		Oyata-Minami Park	4-42-1 Nakagawa
88	Adachi-ku	Kita-Shikahama Park	3-26 Shikahama
89		Toneri Park	1-1 Toneri Koen
90		Kita-Miyagicho Park	2-37-1 Ogi
91	Katsushika-ku	Kohoku Water Supply Station	5-5 Kohoku
92		Kanamachi Purification Plant	1-1 Kanamachi-josuijo
93		Mizumoto Water Supply Station (Jiyu Hiroba in Mizumoto Park)	4 Mizumoto Koen
94	Edogawa-ku	Kami-chiba Park	3-25-1 Higashi-horikiri
95		Shinkoiwa Park	1-1-3 Nishi-shinkoiwa
96		Shibue Higashi Park	2-15 Higashi-yotsugi
97	Edogawa-ku	Nishi-mizue Water Supply Station	1-26-2 Higashi-mizue
98		Kasai Water Supply Station	3-9 Kita-kasai
99		Shinozaki Park	1-25 Kami-shinozaki
100	Edogawa-ku	Ukita Central Park	4-15 Kita-kasai
101		Koiwa Park	6-43 Kita-koiwa
102		Ojima Komatsugawa Park	1-7 Komatsugawa
103	Edogawa-ku	Tokyo Metropolitan Kasai Minami High School	1-11-1 Minami-kasai
104		Tentative name: Ichinoe 5-chome Park	5-14 Ichinoe

Subtotal of reserved water volume in 23 wards [Established by Bureau of Waterworks] (104 places) 689,580

[Under the jurisdiction of Urban Development Bureau, etc.]			
No.	Municipality	Facilities	Address
105	Sumida-ku	Shirahige Higashi District Disaster Relief Facility	2 Tsutsumidori
The existing water storage tank in Shirahige Higashi District Disaster Relief Facility serves as a water supply point.			
Total volume of reserved water in 23 wards (105 places)			692,280

List of Emergency Water Supply Stations (Water Supply Points) Current as of April 1, 2019

2. Water supply points in Tama District (emergency water storage tanks, purification plants, water supply stations, etc.)

[Established by Bureau of Waterworks] (m³)			
No.	Municipality	Facilities	Address
1	Higashi-murayama-shi	Yarimizu Water Supply Station	401 Yarimizu
2		Nishi-terakata Water Supply Station	1006-167 Nishi-terakata-machi
3		Hazama Water Supply Station	1994-478 Hazamamachi
4	Higashi-murayama-shi	Inume Daini Water Supply Station	710 Inumemachi
5		Takatsuki Water Supply Station	2240 Takatsukimachi
6		Sanda Water Supply Station	2-6-1 Sandamachi
7	Kokubunji-shi	Higashi-asakawa Water Supply Station	674 Higashi-asakawamachi
8		Terada Water Supply Station	1359-4 Teradamachi
9		Motohachioji Water Supply Station	3-2750-487 Motohachiojimachi
10	Hachioji-shi	Kitano Water Supply Station	595-3 Kitanomachi
11		Nanyodai Water Supply Station	3-5-1 Nanyodai
12		Narahara Water Supply Station	1294-3 Naraharamachi
13	Tachikawa-shi	Akatsukicho Water Supply Station	3-3-1 Akatsukicho
14		Kuboyama Water Supply Station	2-15-1 Kuboyamacho
15		Ofuna Water Supply Station	3-56-1 Nanakuni
16	Mitaka-shi	Yarimizu Oyama Water Supply Station	2-92 Yarimizu
17		Minami-osawa Water Supply Station	4-25 Minami-osawa
18		Ryonan Park	1572 Nagabusamachi
19	Tachikawa-shi	Kunugida Pump Station	545 Kunugidamachi
20		Shibasaki Purification Plant	1-1-41 Shibasakicho
21		Sunagawa Central Purification Plant (Note 1)	3-1-1-7 Sunagawacho
22	Tachikawa-shi	Tachikawa Sakaecho Purification Plant	5-38-5 Sakaecho
23		Nishisuna Daiichi Purification Plant (Note 1)	2-53-14 Nishisunacho
24		Tachikawa Sunagawa Purification Plant	6-41-1 Sunagawacho
25	Mitaka-shi	Matsunaka Park	1-19-12 Nishisunacho
26		Kamirenjaku Purification Plant (Western Water Supply Station)	9-41-4 Kamirenjaku
27		Mitaka Shinkawa Purification Plant (Eastern Water Supply Station)	2-1-15 Shinkawa
28	Ome-shi	Hinatawada Purification Plant	2-370 Hinatawada
29		Chigase Daini Purification Plant	1-69-1 Chigasemachi
30		Mitakesan Daiichi Water Supply Station	170-3 Mitakesan
31	Ome-shi	Nariki Water Supply Station	8-690-3 Nariki
32		Shinmachi Water Supply Station	5-24-1 Shinmachi
33		Futamatao Water Supply Station	5-107-2 Futamatao
34	Fuchu-shi	Shirayama Water Supply Station	6-95-1 Higashiome
35		Baigo Water Supply Station	2-578-1 Wadamachi
36		Fuchu Musashidai Purification Plant and Fuchu Musashidai Pump Station	2-7 Musashidai and 1-25 Musashidai
37	Fuchu-shi	Wakamatsu Purification Plant	4-10 Wakamatsucho
38		Saiwaicho Purification Plant (Note 2)	2-24 Saiwaicho
39		Fuchu Minamicho Purification Plant	1-50 Minamicho
40	Chofu-shi	Musashino Park	3-2 Tamacho
41		Kami-ishiwaru Purification Plant	1-34-7 Kami-ishiwaru
42		Sengawa Purification Plant	3-6-27 Sengawacho
43	Koganei-shi	Jindaiji Purification Plant	5-56-1 Jindaiji Minamimachi
44		Chofu Nishimachi Water Supply Station	717 Nishimachi
45		Onoji Water Supply Station	2637-1 Onojimachi
46	Kodaira-shi	Haramachida Purification Plant	5-13-3 Haramachida
47		Takinosawa Purification Plant	2-7-7 Asahimachi
48		Nozuta Purification Plant	3398 Nozutamachi
49	Machida-shi	Tsukushino Central Park	3-19 Tsukushino
50		Tsurukawa Central Park	6-6 Tsurukawa
51		Naruse Community Center	2-49-1 Nishinaruse
52	Koganei-shi	Tadao Park	1-3 Tadao
53		Miwa Central Park	3-21 Miwa Midoriyama
54		Kajino Purification Plant	5-10-33 Kajinocho
55	Kodaira-shi	Josui-minami Purification Plant	3-12-36 Josui Minamicho, Kodaira-shi
56		Ogawa Purification Plant	1-847 Ogawacho
57		Tsuda Second Water Resource	3-39-3 Tsudamachi
58	Hino-shi	Osakaue Purification Plant	1-17-11 Osakaue
59		Tamadaira Purification Plant	2-7-2 Tamadaira
60		Hodokubo Water Supply Station	5-10-1 Hodokubo
61	Hino-shi	Misawa Water Supply Station	905-2 Misawa
62		Hino Asahigaoka Water Supply Station	2-42-2 Asahigaoka

(Note 1) Sunagawa Central Purification Plant and Nishisuna Daiichi Purification Plant have ceased operation since August 14, 2002

(Note 2) Saiwaicho Purification Plant is offline due to construction work until March 2020.

(Note 3) Misumi Water Supply Station is offline until March 2021.

(Note 4) Kiyose Asahigaoka Purification Plant has ceased operation since June 24, 2005.

(Note 5) Water transport supply base (water supply facility for vehicles such as water trucks)
The municipal elementary and junior high schools and evacuation areas will supply emergency water to individuals.

[Established by Bureau of Waterworks] (m³)			
No.	Municipality	Facilities	Address
63	Higashi-murayama-shi	Yasaka Water Supply Station	5-4-46 Fujimicho
64		Higashi-murayama Purification Plant	2-20-236 Misumicho
65		Misumi Water Supply Station (Note 3)	2-13-4 Misumicho
66	Kokubunji-shi	Higashimurayama City Athletic Park	1-9-5 Ontacho
67		Akitsu Elementary School	3-48-1 Akitsucho
68		Higashi-koigakubo Purification Plant	2-5-8 Higashi-koigakubo
69	Kunitachi-shi	Kokubunji Kitamachi Daini Purification Plant	4-1-5 Kitamachi
70		Kunitachi Naka Purification Plant	3-8-1 Naka
71		Yaho Purification Plant	1462-1 Yaho
72	Nishitokyo-shi	Shibakubo Purification Plant	5-9-1 Shibakubocho
73		Hoyacho Purification Plant	1-5-24 Hoyacho
74		Nishitokyo Sakaecho Purification Plant	2-7-6 Sakaecho
75	Fussa-shi	Fussa Musashinodai Purification Plant	2-32 Musashinodai
76		Myojinshita Park	1-12-1 Minami-den-en
77		Izumi Honcho Purification Plant	4-6-1 Izumi Honcho
78	Higashiyamato-shi	Kamikitadai Purification Plant	1-801-1 Kamikitadai
79		Higashi-yamato Water Supply Station	3-44 Sakuragaoka
80		Kiyose Motomachi Purification Plant	2-27-12 Motomachi
81	Kiyose-shi	Kiyose Asahigaoka Purification Plant (Note 4)	2-5-5 Asahigaoka
82		Kiyose City Third Nursery School	3-755-1 Asahigaoka
83		Minamisawa Purification Plant	3-9-21 Minamisawa
84	Musashimurayama-shi	Takiyama Purification Plant	6-1-1 Takiyama
85		Gakuen Water Supply Station	1-5-7 Gakuen
86		Nakato Water Supply Station	2-1-3 Nakato
87	Tama-shi	Nakahara Park	2-21-4 Nakahara
88		Sakuragaoka Purification Plant	4-10 Sakuragaoka
89		Ochiai Purification Plant	1-12 Nakazawa
90	Tama-shi	Atago Water Supply Station	2-51 Atago
91		Minamino Water Supply Station	2-16 Minamino
92		Hijirigaoka Water Supply Station	4-1 Hijirigaoka
93	Inagi-shi	Namiki Park	1551-1 Wada
94		Sakahama Purification Plant	816 Sakahama
95		Koyodai Water Supply Station	6-16 Koyodai
96	Akiruno-shi	Wakabadai Water Supply Station	1-19 Wakabadai
97		Akirudai Water Supply Station	3-2-10 Akigawa
98		Sugao Water Supply Station	683 Sugao
99	Mizuho-ku	Kamiyotsugi Purification Plant	407 Kamiyotsugi
100		Tokura Water Supply Station	348-1 Tokura
101		Kominedai Water Supply Station	40 Kominedai
102	Hinode-machi	Ina Water Supply Station	372-3 Ina
103		Ishihata Water Supply Station	2301 Ishihata
104		Bunkanomori Water Supply Station	3075 Hirai

Subtotal of reserved water volume in Tama District [Municipalities supplied by Bureau of Waterworks] (104 places) 355,910

[Municipalities not supplied by Bureau of Waterworks]			
No.	Municipality	Facilities	Address
1	Musashino-shi	Daiichi Purification Plant (Note 5)	4-11-46 Kichioji Kitamachi
2		Daini Purification Plant (Note 5)	1-6-6 Sakurazutsumi
3	Akishima-shi	Western Water Supply Station	2-17-16 Midoricho
4		Eastern Water Supply Station	4-23 Asahicho
5	Hamura-shi	Daiichi Water Supply Station	2-18-5 Midorigaoka
6		Ozaku Purification Plant	4-2-1 Ozakudai

Subtotal of reserved water volume in Tama District [Municipalities not supplied by Bureau of Waterworks] (6 places) 21,260

Total volume of reserved water in Tama District (110 places)			377,170
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★: Emergency water storage tank (1,500m³ tank)
☆:

(5) List of Tokyo Disaster Base Hospitals

A Tokyo Disaster Base Hospital is a hospital that will provide hospitalization and treatment to mainly people who are seriously injured. A total of 82 hospitals have received this designation to ensure people who are seriously injured during a disaster can receive appropriate medical treatment.

Current as of May 31, 2018

Secondary Medical Care Zone	Facility Name	Location	Telephone Number	Number of Hospital Beds	Tertiary Emergency	Heliport	Tokyo DMAT
Central	Nihon University Surugadai Hospital	1-6 Surugadai,Kanda, Chiyoda-ku	03 – 3293 – 1711	320	○		○
	Mitsui Memorial Hospital	1 Kanda-Izumi-cho, Chiyoda-ku	03 – 3862 – 9111	482			
	St Luke's International Hospital	9-1 Akashi-cho, Chuo-ku	03 – 3541 – 5151	520	○		○
	Saiseikai Central Hospital	1-4-17 Mita, Minato-ku	03 – 3451 – 8211	535	○		
	The Jikei University Hospital	3-19-18 Nishishinbashi, Minato-ku	03 – 3433 – 1111	1,075			
	Kitasato University Kitasato Institute Hospital	5-9-1 Shiragane, Minato-ku	03 – 3444 – 6161	329			
	☆ The Nippon Dental University	1-1-5 Sendagi, Bunkyo-ku	03 – 3822 – 2131	897	○	○	○
	Metropolitan Komagome Hospital	3-18-22 Honkomagome, Bunkyo-ku	03 – 3823 – 2101	815			
	Juntendo Medical Institution	3-1-3 Hongou, Bunkyo-ku	03 – 3813 – 3111	1,026		○	
	Tokyo Medical and Dental University Hospital Facility of Medicine	1-5-45 Yushima, Bunkyo-ku	03 – 3813 – 6111	753	○	○	○
Central South	The University of Tokyo Hospital	7-3-1 Hongou, Bunkyo-ku	03 – 3815 – 5411	1,211	○	○	
	Eiju General Hospital	2-23-16 Higashiueno, Taitou-ku	03 – 3833 – 8381	400		○	
	Showa University Hospital	1-5-8 Hatanodai, Shinagawa-ku	03 – 3784 – 8000	815	○		○
	Kanto Medical Center NTT EC	5-9-22 Higashigotanda, Shinagawa-ku	03 – 3448 – 6111	627			
	☆ Toho University Omori Medical Center	6-11-1 Omorinishi, Ota-ku	03 – 3762 – 4151	948	○		○
	Omori Red Cross Hospital	4-30-1 Chuo, Ota-ku	03 – 3775 – 3111	344			
	Ebara Hospital, Tokyo Metropolitan Health and Medical Treatment Corporation	4-5-10 Higashiyukigaya, Ota-ku	03 – 5734 – 8000	506		○	
	Tokyo Rosai Hospital	4-13-21 Omori-minami, Ota-ku	03 – 3742 – 7301	400		○	
	Ikegami General Hospital	6-1-19 Ikegami, Ota-ku	03 – 3752 – 3151	384			
	Tokyo Medical Center Co. Ltd.	2-5-1 Higashigaoka, Meguro-ku	03 – 3411 – 0111	760	○		○
Central South-West	Shiseikai Daini Hospital	5-19-1 Kamisoshigaya, Setagaya-ku	03 – 3300 – 0366	305			
	Kanto Central Hospital of the Mutual Aid Association of Public School Teachers	6-25-1 Kamiyoga, Setagaya-ku	03 – 3429 – 1171	403			
	Tokyo Metropolitan Matsuzawa Hospital	2-1-1 Kamikitazawa, Setagaya-ku	03 – 3303 – 7211	898		○	
	★ Tokyo Metropolitan Hiroo Hospital	2-34-10 Ebisu, Shibuya-ku	03 – 3444 – 1181	469	○	○	○
	Japanese Red Cross Medical Center	4-1-22 Hiroo, Shibuya-ku	03 – 3400 – 1311	708	○	○	○
	☆ Tokyo Medical University Hospital	6-7-1 Nishishinjuku, Shinjuku-ku	03 – 3342 – 6111	1,015	○		○
	Keio University Hospital	35 Shinanomachi, Shinjuku-ku	03 – 3353 – 1211	1,029			
Central West	Tokyo Woman's Medical University Hospital	8-1 Kawada-cho, Shinjuku-ku	03 – 3353 – 8111	1,379	○		○
	Ohkubo Hospital, Tokyo Metropolitan Health and Medical Treatment Corporation	2-44-1 Kabuki-cho, Shinjuku-ku	03 – 5273 – 7711	304			
	International Medical Center Of Japan	1-21-1 Toyama, Shinjuku-ku	03 – 3202 – 7181	781	○	○	
	Social Insurance Central General Hospital	3-22-1 Hyakunin-cho, Shinjuku-ku	03 – 3364 – 0251	418			
	Tokyo Shinjuku Medical Center	5-1 Tsukudo-cho, Shinjuku-ku	03 – 3269 – 8111	520			
	Nakano General Hospital	4-59-16 Chuo, Nakano-ku	03 – 3382 – 1231	296			
	Tokyo Metropolitan Police Hospital	4-22-1 Nakano, Nakano-ku	03 – 5343 – 5611	415			
	Ogikubo Hospital	3-1-24 Imagawa, Suginami-ku	03 – 3399 – 1101	252		○	
	Kosei General Hospital	2-25-1 Wada, Suginami-ku	03 – 3383 – 1281	340			
	Tokyo Metropolitan Ohtsuka Hospital	2-8-1 Minamitsuka, Toshima-ku	03 – 3941 – 3211	508			
Central North-West	Tokyo-Kita Social Insurance Hospital	4-17-56 Akabanedai, Kita-ku	03 – 5963 – 3311	343			
	Nihon University Itabashi Hospital	30-1 Oyaguchikami-cho, Itabashi-ku	03 – 3972 – 8111	1,025	○		○
	☆ Teikyo University Hospital	2-11-1 Kaga, Itabashi-ku	03 – 3964 – 1211	1,078	○	○	○
	Tokyo Metropolitan Geriatric Hospital and Institute of Gerontology	35-2 Sakae-cho, Itabashi-ku	03 – 3964 – 1141	550			
	Toshima Hospital, Tokyo Metropolitan Health and Medical Treatment Corporation	33-1 Sakaecho, Itabashi-ku	03 – 5375 – 1234	470		○	
	Nerima Hikarigaoka Hospital	2-11-1 Hikarigaoka, Nerima-ku	03 – 3979 – 3611	342			
	Juntendo University Nerima Hospital	3-1-10 Takanodai, Nerima-ku	03 – 5923 – 3111	400			

Secondary Medical Care Zone	Facility Name	Location	Telephone Number	Number of Hospital Beds	Tertiary Emergency	Heliport	Tokyo DMAT
Central North-East	☆ Tokyo Women's Medical University Center East	2-1-10 Nishioku, Arakawa-ku	03 – 3810 – 1111	450	○		○
	Nishiarai Hospital	1-12-12 Nishiaraihoncho, Adachi-ku	03 – 5647 – 1700	207			
	Sonoda Daiichi Hospital	4-1-12 Takenotsuka, Adachi-ku	03 – 3850 – 5721	221			
	Hakujikai Memorial Hospital	5-11-1 Shikahama, Adachi-ku	03 – 3899 – 1311	306			
	Jikei University School of Medicine Aoto Hospital	6-41-2 Aoto, Katsushika-ku	03 – 3603 – 2111	365			
	Tobu Chiiki Hospital, Tokyo Metropolitan Health and Medical Treatment Corporation	5-14-1 Kameari, Katsushika-ku	03 – 5682 – 5111	314			
	Heisei Tateishi Hospital	5-1-9 Tateishi, Katsushika-ku	03 – 3692 – 2121	203			
Central East	☆ Tokyo Metropolitan Bokutoh Hospital	4-23-15 Kotobashi, Sumida-ku	03 – 3633 – 6151	765	○	○	○
	Tokyo Hikifune Hospital	2-27-1 Higashimukojima, Sumida-ku	03 – 5655 – 1120	200			○
	Koto Hospital	6-8-5 Oshima, Koto-ku	03 – 3685 – 2166	286			
	Juntendo University School of Medicine, Juntendo Tokyo Koto Geriatric Medical Center	3-3-20 Shinsuna, Koto-ku	03 – 5632 – 3111	404			
	The Cancer Institute Hospital of JFCR	3-8-31 Ariake, Koto-ku	03 – 3520 – 0111	686		○	
	Showa University Koto Toyosu Hospital	5-1-38 Toyosu, Koto-ku	03 – 6204 – 6000	309			
	Tokyo Rinkai Hospital	1-4-2 Rinkai-cho, Edogawa-ku	03 – 5605 – 8811	400			
	Edogawa Hospital	2-24-18 Higashikoiba, Edogawa-ku	03 – 3673 – 1221	418			
	Moriyama Memorial Hospital	4-3-1 Kitakasai, Edogawa-ku	03 – 5679 – 1211	275			
Tama West	☆ Ome Municipal General Hospital	4-16-5 Higashiome, Ome-shi	0428 – 22 – 3191	562	○	○	○
	Akiru Municipal General Hospital	78-1 Hikida, Akiruno-shi	042 – 558 – 0321	305			
	Fussa Hospital	1-6-1 Kamidaira, Fussa-shi	042 – 551 – 1111	316			
Tama South	☆ Tokyo Medical University Hachioji Medical Center	1163 Tatemachi, Hachioji-shi	042 – 665 – 5611	610	○	○	○
	Tokai University Hachioji Hospital	1838 Ishikawa-cho, Hachioji-shi	042 – 639 – 1111	500		○	○
	Nippon Medical School Tama Nagayama Hospital	1-7-1 Nagayama, Tama-shi	042 – 371 – 2111	401	○		○
	Tama Nanbu Chiiki Hospital, Tokyo Metropolitan Health and Medical Treatment Corporation	2-1-2 Nakazawa, Tama-shi	042 – 338 – 5111	287			
	Inagi Municipal Hospital	1171 Omaru, Inage-shi	042 – 377 – 0931	290			
	Machida Municipal Hospital	2-15-41 Asahimachi, Machida-shi	042 – 722 – 2230	447			
	Minami-Machida Hospital	4-4-1 Tsuruma, Machida-shi	042 – 799 – 6161	222			
	Hino Municipal Hospital	4-3-1 Tamahira, Hino-shi	042 – 581 – 2677	300			
	★ National Disaster Medical Center	3256 Midori-cho,Tachikawa-shi	042 – 526 – 5511	455	○	○	○
Kita-Tama West	Tachikawa Hospital	4-2-22 Nishikicho, Tachikawa City	042 – 523 – 3131	450			
	Higashiyamato Hospital	1-13-12 Minamimachi, Higashiyamato-shi	042 – 562 – 1411	284			
	Musashino Red Cross Hospital	1-26-1 Kyonan-cho, Musashino-shi	0422 – 32 – 3111	611	○	○	○
Kita-Tama South	☆ Tokyo Metropolitan Tama Medical Center	2-8-29 Musashinodai Fuchu-shi	Main : 042 – 323 – 5111 Infant : 042 – 300 – 5111	789 561	○ ○	○	○
	Kyorin University Hospital	6-20-2 Shinkawa, Mitaka-shi	0422 – 47 – 5511	1,153	○	○	○
	Jikei University School of Medicine Daisan Hospital	4-11-1 Izumihoncho, Komae-shi	03 – 3480 – 1151	581			
	☆ Showa General Hospital	8-1-1 Hanakoganei, Kodaira-shi	042 – 461 – 0052	518	○		○
	Sassa General Hospital	4-24-15 Tanashi-cho, Nishitokyo-shi	042 – 461 – 1535	183			
Kita-Tama North	Tama-Hokubu Medical Center, Tokyo Metropolitan Health and Medical Treatment Corporation	1-7-1 Aoba-cho, Higashimurayama-shi	042 – 396 – 3811	344			
	National Hospital Organization Tokyo National Hospital	3-1-1 Takeoka Kiyose-shi	042 – 491 – 2111	560			
Total	Total of 82 facilities			43,933	26	23	25

The ★ symbol shows core disaster medical hospitals and ☆ symbol indicates that it is a local core disaster base medical center.
“Tertiary emergency” means a critical care center or other facility that provides tertiary emergency care.
“Heliport” means an emergency landing place for a helicopter.
Tokyo DMAT refers to Tokyo DMAT designated hospitals.

6. Primary Measures Taken by the Tokyo Metropolitan Government

(1) Promotion of Earthquake-Resistant Structures

TMG Plan for Promotion of Renovation for Earthquake-Resistant Structures

“The TMG Plan for Promotion of Renovation for Earthquake-Resistant Structures” is being developed based on the laws relating to the promotion of renovation for earthquake-resistant structures of buildings with the aim of protecting the lives and properties of Tokyo citizens, systematically and comprehensively promoting quake-resilience inspections and quake-resistant renovation of homes and buildings, and creating a Tokyo that is resistant to disasters.

Type of Building	Current Status	Quake-Resistant Rate			
		Target			
		End of FY2016	End of FY2019	End of FY2020	End of FY2025
Designated Buildings Along Emergency Transportation Roads	Dec. 2015	80.9%	—	90% * 1	100%
Buildings Along Emergency Transportation Roads	Mar. 2015	79.7%	—	—	90% * 2
Housing	Mar. 2015	83.8%	—	95%	* 3
Apartment Buildings	—	—	—	95%	* 3
Main Public Housing	Mar. 2015	83.7%	—	95%	* 3
Tokyo Public Housing, etc.	Mar. 2015	82.7%	—	100%	—
Designated Buildings	Mar. 2015	85.6%	—	95%	* 4
Public Buildings Important for Disaster Prevention	Mar. 2015	96.7%	100% (To be completed as soon as possible)		
Tokyo Disaster Base Hospitals	Sep. 2014	87.8%	—	—	100%
Social Welfare Facility	Oct. 2013	94.1% * 5	—	100%	—
Nursery Center	Oct. 2013	89.8% * 6	—	100%	—
Private School	Apr. 2015	92.0%	—	100%	—

(According to the Tokyo Earthquake-Resistance Promotion Plan, revised Mar. 2016)

*1 90% quake-resistant rate and resolution of high risk of collapse in tall buildings (buildings with seismic index value equivalent to less than 0.3).

*2 For buildings located along general emergency routes, the earthquake-resistant target is set to 100% starting from the end of FY 2025, and the specific target for fiscal year and target value will be decided the next time when the plan is revised.

*3 In the end of FY 2025, poorly constructed houses without earthquake resistance will be, as a whole, eliminated.

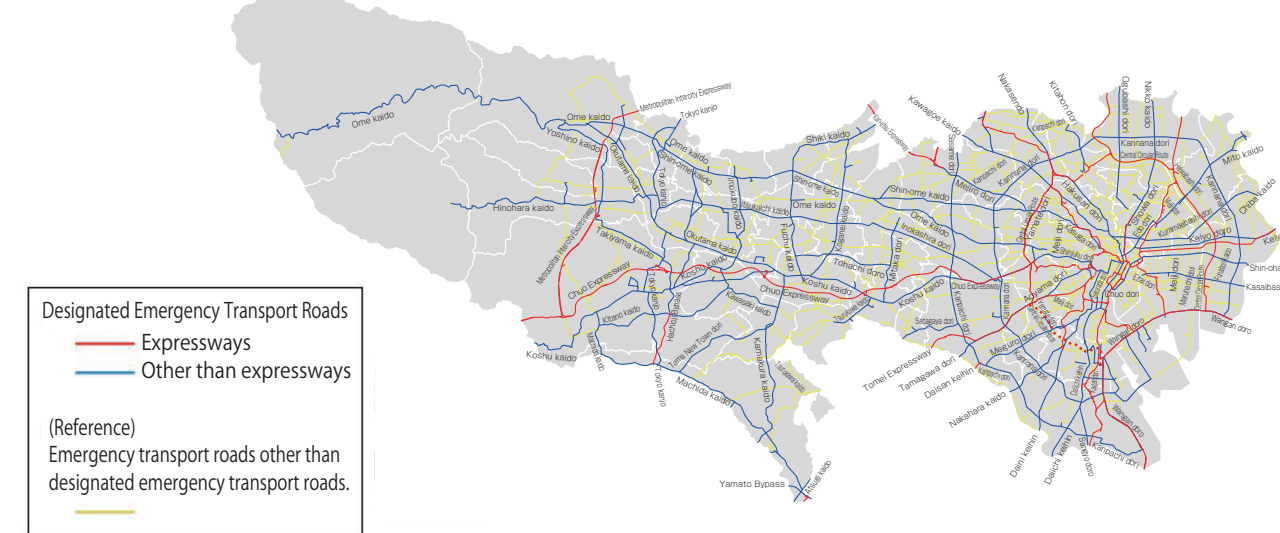
*4 The target for the end of FY 2025 will be determined the next time the plan is revised.

*5 Current quake-resistant rate for social welfare facilities, etc. (mainly residential facilities used by people requiring special assistance in disasters) is as of Oct. 1, 2013 (as calculated by TMG based on the number of valid responses in the Ministry of Health, Labour, and Welfare’s investigation results).

*6 Current quake-resistant rate for nursery centers is as of Oct. 1, 2013 (as calculated by TMG based on the number of valid responses in the Ministry of Health, Labour, and Welfare’s survey results).

Securing Functions of Designated Emergency Transport Roads

In order to prevent the buildings along the emergency transportation roads from collapsing due to an earthquake and blocking the roads and to secure the function of the roads, which are essential for the rescue work during an earthquake disaster and reconstruction, TMG enforced the “Ordinance to Promote Renovation for Earthquake Resistant Structure of the Buildings Along the Emergency Transportation Roads in Tokyo” in April 2011 and designated the roads (Designated Emergency Transportation Roads) for which the buildings along the roads especially need to be earthquake-resistant on June 28, 2011. (Refer to the map)



Total length of Designated Emergency Transport Roads: Approx. 1,000 km
Total buildings along Designated Emergency Transport Roads: Approx. 5,000

Owners of buildings along designated emergency transport roads are required to have earthquake resistance assessments made of their buildings

Since the emergency transport roads are the main arteries for rescue and relief, firefighting activities, materials transport, and restoration and recovery, it is very important to prevent them from being blocked by collapsed buildings to protect the lives and property of citizens and to keep metropolitan Tokyo functioning. For this reason, TMG has designated particular important roads as “designated emergency transport roads” and requires that all buildings along roads to which the set conditions apply (designated road buildings) be given earthquake resistance assessments and is providing financial assistance for this.



Ordinance to Promote Earthquake Proofing of Buildings Along Emergency Transport Roads in Tokyo

June 28, 2011 Designation of designated emergency transport roads
October 1, 2011 Start of requirement to report earthquake resistance status
April 1, 2012 Start of requirement to conduct earthquake resistance assessment
February 6, 2015 Began publishing buildings yet to undergo earthquake resistance diagnosis
March 29, 2018 Published results of earthquake resistance diagnosis

TMG Earthquake Resistant Mark Indication System

In order for the information on the earthquake-resistance of buildings to be widely distributed and enable Tokyo Metropolitan citizens to use buildings with peace of mind, we implement “the TMG Earthquake-Resistant Mark Indication System.”

Under this system, “the TMG Earthquake Resistant Mark” is provided free of charge to all buildings in the Tokyo Metropolitan Area which have been verified as conforming to earthquake-resistance standards, and is placed at the building entrance.

TMG Earthquake-Resistant Mark Indication System

TMG Earthquake-Resistant Mark

*It will be described as Conforming to New Earthquake-Resistance Standards for buildings with new earthquake-resistance standards, Completion of the Earthquake-Resilience Check for buildings with old earthquake-resistance standards but their conformity to the earthquake-resistance standards has been confirmed, and Completion of the Renovation for Earthquake-Resistant Structures for buildings with old earthquake-resistance standards and their conformity to the earthquake-resistance standards has been confirmed by the renovation for earthquake-resistant structure.

(2) Measures for Areas with Close-Set Wooden Houses

Tokyo Metropolitan Regional Disaster Prevention Plan

In developing districts that are expected to suffer particularly great damage in the event of a disaster, TMG along with the wards are promoting construction of roads and advancing the construction of fireproof and earthquake-resistant structures that can serve as fire breaks, based on the Urban Development Plan for Disaster Resistance.

At the end of FY2015, TMG revised the Urban Development Plan for Disaster Resistance. In doing so, it prescribed plans for a network of community roads geared to disaster preparedness to enable the passage of emergency vehicles and smooth implementation of firefighting, rescue activities and evacuation. Also, TMG promoted new initiatives for accelerating the construction of disaster-resistant communities through widening narrow roads, encouraging fireproof renovation of buildings alongside roads and so on.

In order to implement improvements in redeveloped areas systematically, a development program will be established within the promotion plan for initiatives to take place in each area. The development program will be updated annually in case there are additional initiatives.

Outside of the developing districts, designation of new fireproof zones is being promoted through setting minimum limits for premises areas and enhancing urban fireproof functions, and efforts are being made to improve areas with close-set wooden houses and prevent the potential spread of fire.

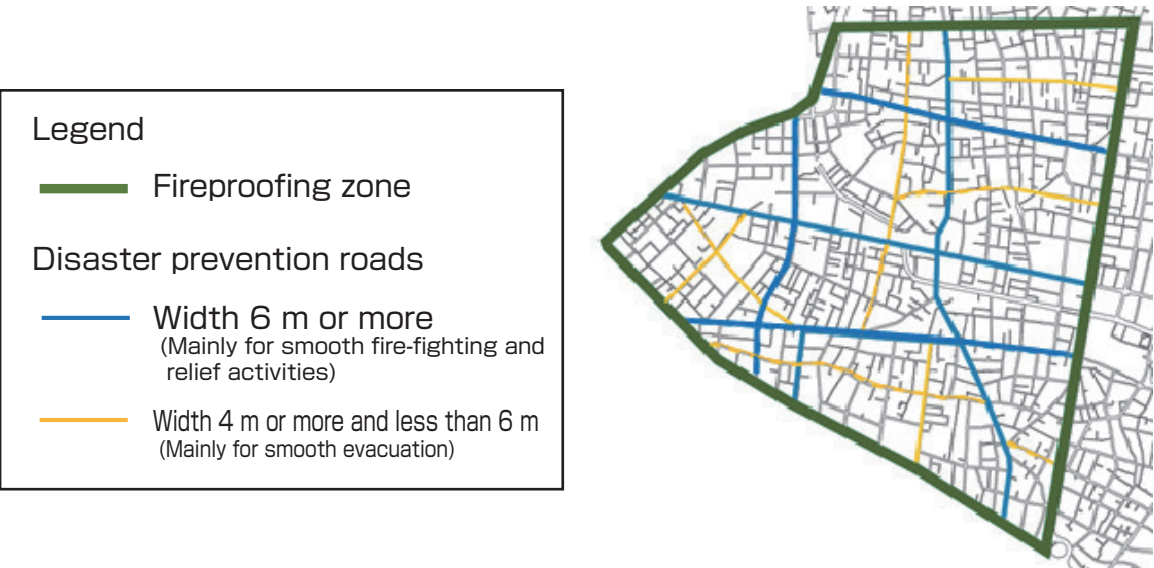


Illustration of disaster prevention road network plan



Examples of disaster prevention road upgrades

Ten-year Project to Advance Fire Resistance in Areas

For conservation areas, we shall focus on making an intensive effort to recover until FY 2020. After that, we will continue to put forth effort to stop the flame from spreading in areas where wooden houses are mostly located or prevent them from being burnt.

Establishment of Fireproofing Zones (March 2013)

Areas that require priority and intensive improvement have been designated as fireproof zones, based on the development program proposed by cities that are going the extra distance in their initiatives, including actively working to raise awareness among local residents. Within these areas, renovation subsidies are provided, and property tax and city planning tax exemptions are offered, to promote the fireproofing of buildings. Moreover, fireproofing of urban areas is strongly promoted by supporting city initiatives for system enhancements and provision of know-how. By 2020. Aiming to “protect urban areas from being burned” in conservation areas (the goal is to achieve (* 70%) of non-combustible areas), and we are working on 53 districts in approximately 3,200 ha (updated on April 31, 2019).

Upgrades of Major City-Planned Roads Forming Firebreak Belts

In order to create “communities where fires will not spread” within redeveloped areas, in 2012 Tokyo Metropolitan Government selected city planning roads effective toward improving disaster preparedness in terms of fire blocking, evacuations, and relief as designated routes for improvement. Currently, work is underway spanning 25 km across 28 zones.

During the redevelopment, hotlines operated by private sector businesses have been set up to support livelihood restoration closely in tune with the needs of relevant rights holders, including providing information on possible resettlement sites or proposing plans for the reconstruction of buildings.

All specified routes that need maintaining and fixing in FY 2020 are being promoted.

Creating an Atmosphere Conducive to Building Disaster-Resistant Communities

This activity will create an atmosphere for building disaster-resistant neighborhoods as part of the local community through awareness programs directed at the residents of areas with close-set wooden houses to communicate the dangers of earthquakes, the importance of self-help and mutual assistance, and to promote a shared sense of awareness.

* Indicator of fire-resistance in urban areas. When the fire-resistant area ratio exceeds 70%, the ratio of fire destruction in the urban area becomes almost zero, as calculated from the state of building fireproofing and open spaces such as roads and parks.

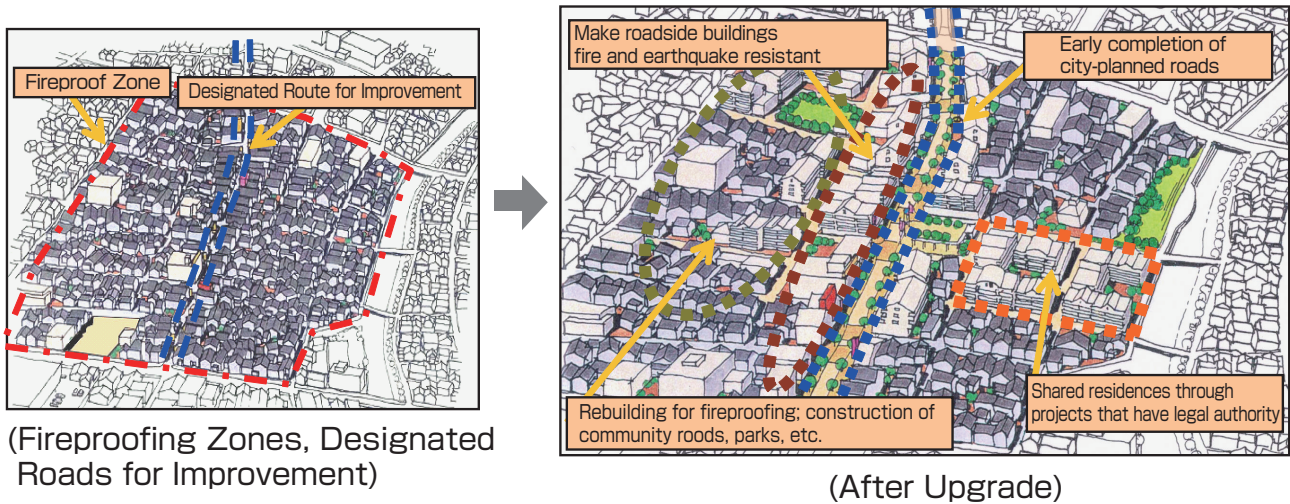
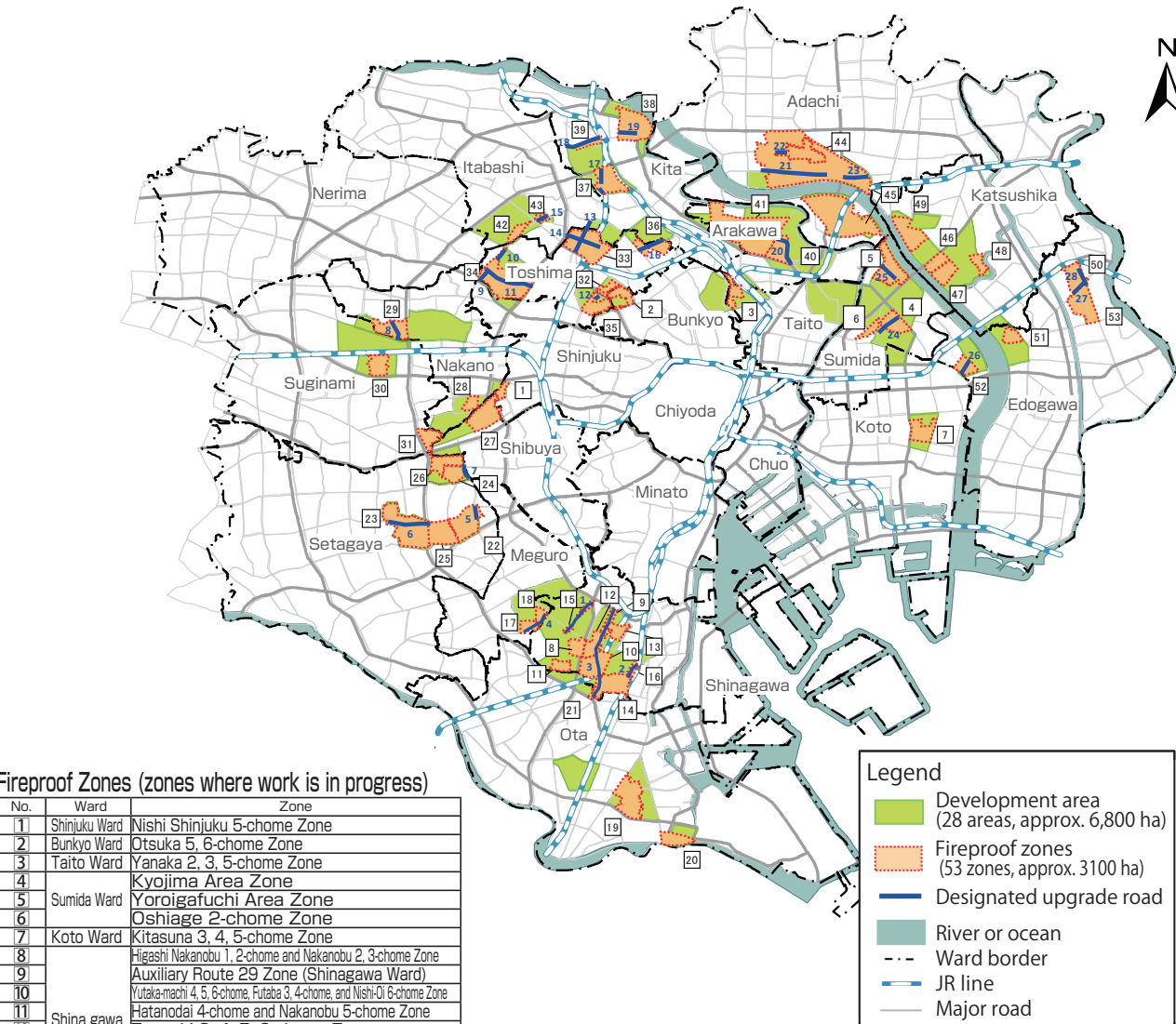


Illustration of preparations

Current and planned fireproof zones (total 53 zones in 19 wards) (current as of April 2018) and designed routes for improvement, city-planned roads (28 sections, total length 25 km)



Fireproof Zones (zones where work is in progress)		
No.	Ward	Zone
1	Shinjuku Ward	Nishi Shinjuku 5-chome Zone
2	Bunkyo Ward	Otsuka 5, 6-chome Zone
3	Taito Ward	Yanaka 2, 3, 5-chome Zone
4	Sumida Ward	Kyojima Area Zone
5		Yoroigafuchi Area Zone
6		Oshiage 2-chome Zone
7	Koto Ward	Kitasuna 3, 4, 5-chome Zone
8		Higashi Nakanobu 1, 2-chome and Nakanobu 2, 3-chome Zone
9		Auxiliary Route 29 Zone (Shinagawa Ward)
10		Yutaka-machi 4, 5, 6-chome, Futaba 3, 4-chome, and Nishi-Oi 6-chome Zone
11	Shinagawa Ward	Hatanodai 4-chome and Nakanobu 5-chome Zone
12		Togoshi 2, 4, 5, 6-chome Zone
13		Nishi Shinagawa 2, 3-chome Zone
14		Oi 5, 7-chome, Nishi Oi 2, 3, 4-chome Zone
15		Radial Route 2 Zone
16		Auxiliary Routes 28 Zone
17	Meguro Ward	Hara-machi 1-chome and Senzoku 1-chome Zone
18		Meguro Honcho 5-chome Zone
19		Omori Naka (Nishi Sakuradani, Higashi Kamata, Omori Naka) Zone
20	Ota Ward	Haneda 2, 3, 6-chome Zone
21		Auxiliary Routes 29 Zone (Ota Ward)
22		Taishido Mishuku Zone
23	Setagaya Ward	Ward Office Area Zone
24		Kitazawa 3, 4-chome Zone
25		Taishido, Wakabayashi Zone
26		Kitazawa 5-chome Ohara 1-chome Zone
27	Shibuya Ward	Motomachi 2'6-chome Zone
28		Yayoi-machi 3-chome Area Zone
29	Nakano Ward	Yamato Cho Zone
30	Suginami Ward	Suginami Dairoku Elementary School Area Zone
31		Honan 1-chome Zone
32		Higashi Ikebukuro 4, 5-chome Zone
33	Toshima Ward	Ikebukuro Honcho and Kami-Ikebukuro Zone
34		Auxiliary Routes 26, 172 Zone
35		Zoshigaya, Minami Ikebukuro Zone
36	Toshima Ward - Kita Ward	Auxiliary Route 81 Zone
37		Jujo Station West Zone
38	Kita Ward	Shimo Zone
39		Akabane Nishi Auxiliary Routes 86 Zone
40	Arakawa Ward	Arakawa 2, 4, 7-chome Zone
41		Machiya and Ogu Zone
42		Oyaguchi 1-chome Area Zone
43	Itabashi Ward	Oyama Station Area West Zone
44		Nishi Arai Station West Exit Area Zone
45	Adachi Ward	Adachi Ward Central and South Zone
46		Yotsugi 1, 2-chome Zone
47	Katsushika Ward	Higashi Yotsugi Zone
48		Higashi Tateishi 4-chome Zone
49		Horikiri 2-chome Area and 4-chome Zone
50	Minami Koiwa Ward	Minami Koiwa 7, 8-chome Area Zone
51	Edogawa Ward	Matsushima 3-chome Zone
52		Hirai 2-chome Area Zone
53		Minami Koiwa, Higashi Matsumoto Zone

Designated Routes

Road name	Location	Total length (m)
1 Radial Route 2	Nishi Gotanda 7-chome - Nishi Nakanobu 1-chome	1,255
2 Auxiliary Route 28	Oi 4-chome area, Shinagawa-ku	520
3 Auxiliary Route 29	Shinagawa Osaki 3-chome - Higashi Magome 2-chome	3,445
4 Auxiliary Route 46	Meguro Honcho 5-chome area	510
5 Auxiliary Route 26	Meguro Honcho 5-chome area - Senzoku 1-chome	550
6 Auxiliary Route 52	Mishuku 2-chome - Ikejiri 4-chome	440
7 Auxiliary Route 26	Wakabayashi 5-chome - Gotokuji 2-chome	1,310
8 Auxiliary Route 227	Meguro Komaba 4-chome - Shibuya Oyama-cho	550
9 Auxiliary Route 26	Yamato-cho 1-chome - 4-chome	710
10 Auxiliary Route 26	Minami Nagasaki 6-chome - Nagasaki 5-chome	320
11 Auxiliary Route 172	Chihaya 4-chome - Kaname-cho 3-chome	460
12 Auxiliary Route 81	Nagasaki 1-chome - Nagasaki 5-chome	1,620
13 Auxiliary Route 73	Minami Ikebukuro 2-chome - 4-chome	260
14 Auxiliary Route 82	Toshima Ikebukuro 2-chome - Itabashi 1-chome	1,070
15 Auxiliary Route 26	Toshima Kami-Ikebukuro 3-chome - Oyama Kanai-cho	1,130
16 Auxiliary Route 81	Oyama-cho area, Itabashi-ku	375
17 Auxiliary Route 81	Toshima Sugamo 4-chome - Kita Nishigahara 3-chome	930
18 Auxiliary Route 73	Kamijujo 2-chome - Jujo Nakahara 2-chome	895
19 Auxiliary Route 86	Akabane Nishi 5-chome - 1-chome	1,150
20 Auxiliary Route 90	Shimo 1-chome area, Kita-ku	620
21 Auxiliary Route 136	Machiya 1-chome - Arakawa 1-chome	1,230
22 Auxiliary Route 138	Ogi 1-chome - Umeda 3-chome	1,910
23 Auxiliary Route 136	Okino 1-chome - Motoki 2-chome	350
24 Auxiliary Route 32	Adachi 1-chome - 3-chome	630
25 Auxiliary Route 120	Oshiage 3-chome - Kyojima 3-chome	860
26 Auxiliary Route 144	Sumida 2-chome - 3-chome	530
27 Auxiliary Route 142	Hirai 2-chome area	490
28 Auxiliary Route 143	Minami Koiwa 4-chome - Higashi Koiwa 4-chome	560
	Minami Koiwa 8-chome area, Edogawa-ku	620

(3) Earthquake Disaster Prevention Measures for Lifelines

Earthquake disaster prevention measures for lifelines such as water, sewerage, etc.

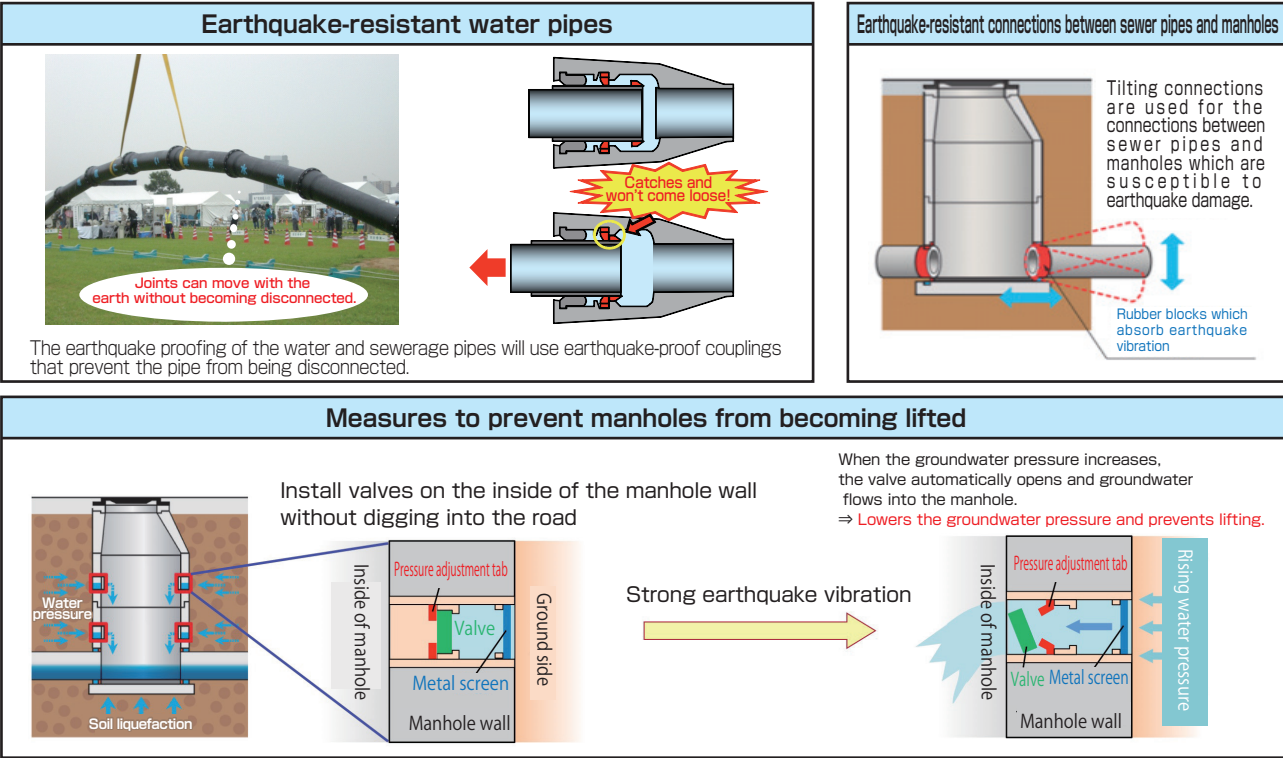
When an earthquake disaster occurs, the lifelines, such as water and sewerage, electricity, gas, and telecommunications, will be affected.

The TMG has developed “TMG Plan for Local Disaster Preparedness Measures” and set goals to restore lifelines within specific periods: 30 days for water and sewerage, 7 days for electricity, 60 days for gas, and 14 days for telecommunications.

In order to minimize damage during a disaster, the following preventive measures have been taken for water and sewerage.

If water and sewage pipes are damaged by a large-scale earthquake, not only will it be difficult to obtain drinking water, but toilets and baths will be unavailable, and leakage of water pipes and sewage can damage people's houses, force a stop to business activities, and in other ways have a severe effect on residents' lives and property. Road collapses caused by leaking water or lifting of manholes by liquids can obstruct vehicle traffic and otherwise interfere with emergency response activities.

In order to avoid such circumstance, we are taking measures such as installing earthquake resistant joints for water pipes, making seismic joints between sewer pipes and manholes, and suppressing the floating of manholes in areas where liquefaction is likely to happen.



Elimination of utility poles

During a disaster, events like fallen utility poles, road closures and severed power lines can impede evacuations, relief activities and the transportation of supplies, as well as interfere with the stable supply of power and telecommunication services. Therefore, Tokyo Metropolitan Government has chosen emergency transportation routes in hopes of strengthening urban disaster prevention capabilities. Also, utility poles are rapidly being buried underground.

As a goal, the elimination of utility poles along primary emergency transportation routes that connect disaster preparedness hubs and facilitate evacuation, relief activities and transportation of supplies during a disaster will be 50% complete by the end of fiscal 2024. More specifically, Loop 7, which will become a boundary for the restricted access area unavailable to regular vehicles, is targeted for 100% completion within this same time frame. These areas represent priorities for the relocation of utility poles underground.

In addition, we are also providing financial as well as technical support to municipalities in promoting the elimination of utility poles across the entire Tokyo Metropolis, thereby enhancing our urban disaster preparedness capabilities.

In order to further promote the elimination of utility poles, Tokyo Metropolitan Government was the first prefecture in Japan to establish an ordinance on promoting their removal in fiscal 2017. Based on this, the Utility Pole Less Tokyo Plan was formulated to set the course of action and goals for the next 10 years. According to this plan, the priority redevelopment area was expanded from the Center Core Area to the inner perimeter of Loop 7, with the redevelopment of the entire target route now in progress. The route also received a new designation for priority redevelopment as it serves as a prefectural road that connects the primary emergency transportation routes with Tokyo Disaster Base Hospitals to further enhance disaster preparedness.

We will keep striving for steadily eliminating the number of non-electric power poles in the city, collaborate with local governors, and develop technologies that help reduce costs. Moreover, we are actively removing electric power poles while holding events to communicate well with urban residents to increase their public awareness and to understand, share and sympathize.

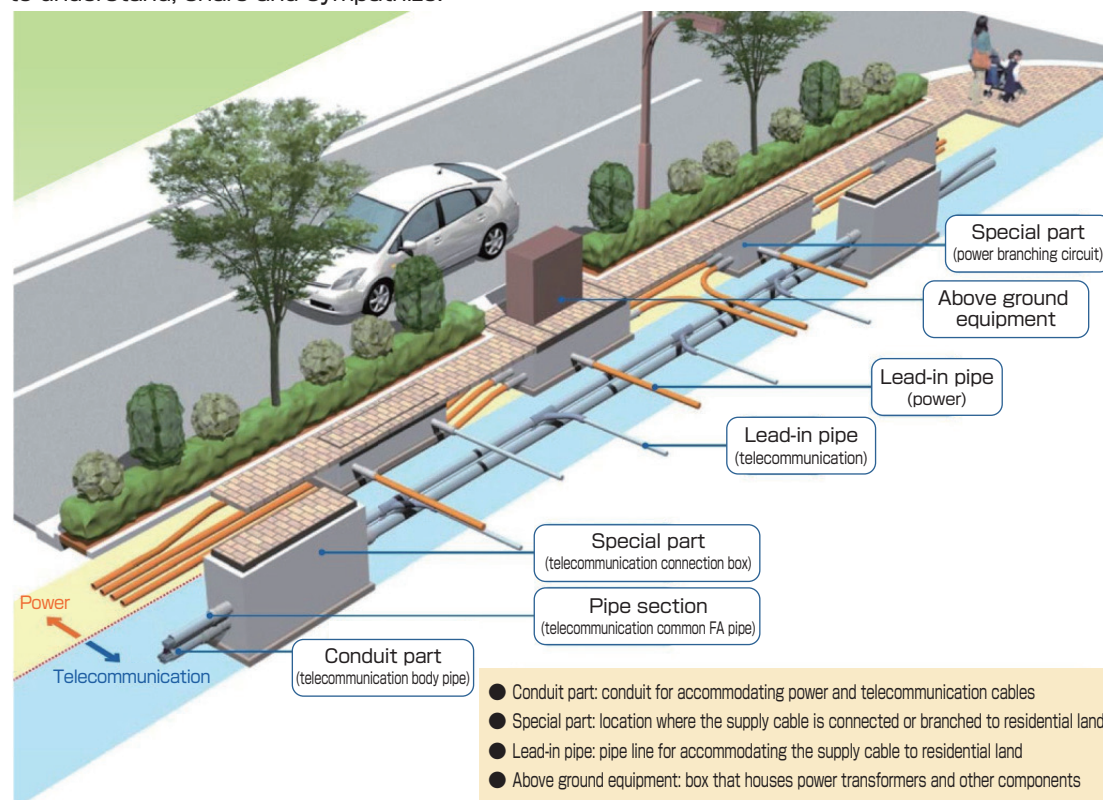


Illustration of distribution upgrade with elimination of utility poles (power cable multipurpose underground utility conduit system)



Example of upgrade by elimination of utility poles (top: before upgrade, bottom: after upgrade)

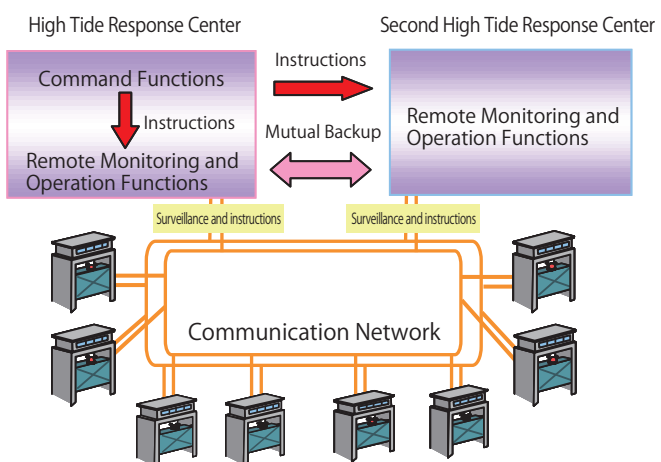
(4) Measures for High Tides and Tsunami

Shore protection facilities

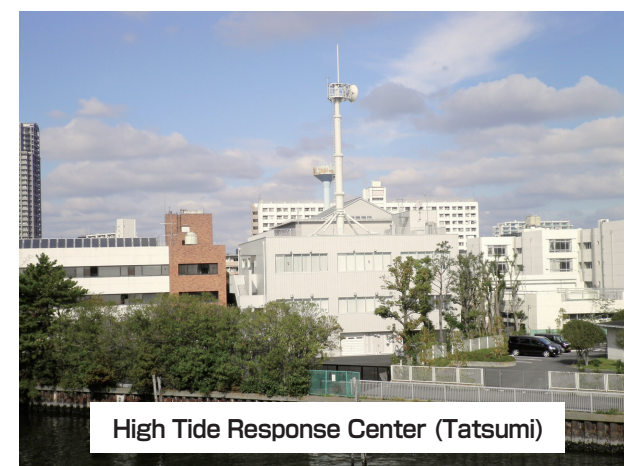
To protect the people of Tokyo from tsunami and high tides, coastal protection facilities such as seawalls, water gates, and more are being upgraded along the coastal areas of Tokyo Bay. The seawalls are installed 4.6 to 8.0 meters above the low tide water levels. Water gates have been installed in canals, and are closed off when there is a risk of flooding from rising tides.

To ensure rapid response to emergency situations such as earthquakes, tsunami, and high tides, the High Tide Response Center was established to unify control of Tokyo Bay water gates and more. With the phased establishment of the Remote Control System starting in 1979, TMG has worked to centralize management of information, unifying supervision and the line of command, as well as to accelerate the operation of water gates. In order to further improve the crisis management system, a second High Tide Response Center has been established. In addition to consolidating the functions of the conventional substations, the two High Tide Response Centers form a setup whereby they can conduct mutual backup.

Formation of 2 bases of a High Tide Response Center



High Tide Response Center (control room)



High Tide Response Center (Tatsumi)



Tatsumi Floodgate in normal open position

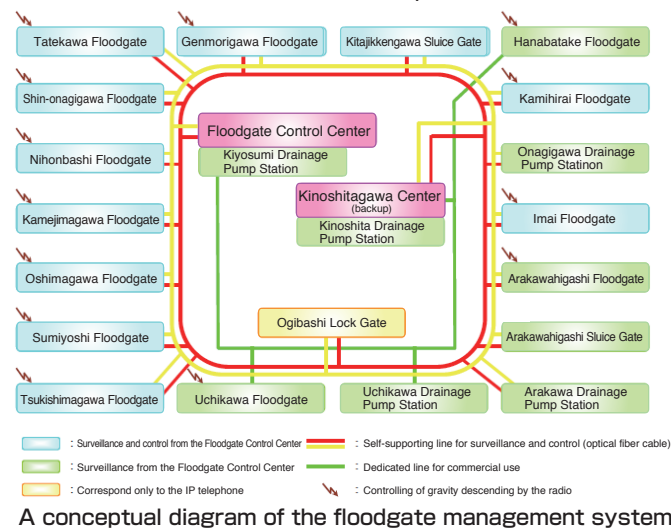


Tatsumi Floodgate closed in preparation for high tide

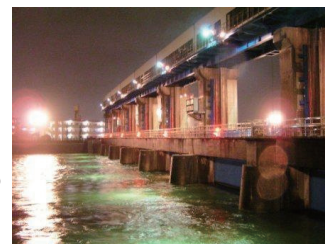
River Facilities

Floodgates have been installed at the mouths of rivers in the eastern low-lying areas. These floodgates can be closed when high tides or tsunami occur, joining the gates to the surrounding seawalls to protect the area. Drainage pumps have been installed in preparation for rising water levels on the inside of the floodgates due to rainfall or other factors, and these pumps operate automatically to discharge the water to the outside of the floodgates when the water level rises.

In order to improve the efficiency in operating each facility of floodgates, a floodgate control system was built utilizing various ICT, such as optical communications, wireless telecommunications, and remote surveillance and control are being conducted in the Floodgate Control Center for 24 hours a day and 365 days a year. The system's reliability is enhanced by the backup in Kinoshitagawa Center that has functions that are equivalent to the Control Center's functions and double looping of the communication cables. Closing the floodgates by the wireless telecommunications is also possible.



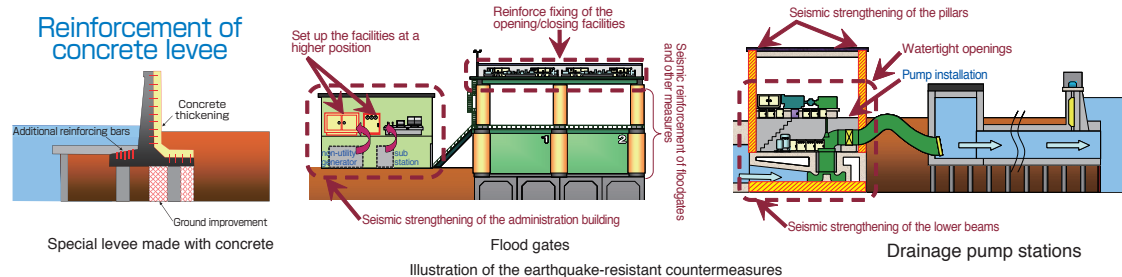
Imai Floodgate in normal open position



Imai Floodgate closed in preparation for high tides

For the eastern low-lying areas, based on the lessons of the Great East Japan Earthquake, the Eastern Low-Lying Areas River Facility Construction Plan that indicates the locations of construction and target years was formulated in order to prevent water intrusion caused by a tsunami in the event of an earthquake with the maximum strength considered possible in the future.

Currently, for the purpose of early improvements of safety in the eastern low-lying areas, the seismic reinforcement of seawalls, floodgates and drainage sites based on this plan is being promoted.



Countermeasures for tsunami in islands

We are promoting comprehensive countermeasures from both the hardware and software sides, such as creating TMG's own damage assessments due to a massive Nankai Trough earthquake and a tsunami flooding hazard map for a tsunami that could cause enormous damage like that from the Great East Japan Earthquake.

(5) Promoting Local Resilience-Building

Background and significance

In order to save as many lives as possible in the event of a disaster, it is important for each person to protect himself or herself, and that everyone help the people who are around them.

However, there are issues that must be solved, such as nonparticipation of younger generations in the disaster preparedness activities in Tokyo, people without a close connection with neighbors, and the opinion of women not being adequately heard in evacuation center operations due to few women involved in disaster prevention.

This is why TMG is supporting efforts to train human resources in local disaster prevention, in cooperation with municipalities and related agencies, with a view to improving local resilience building by nurturing female disaster prevention personnel who can play an active role in disaster prevention activities in the event of a disaster.



Main efforts

1. Implementation of "Citizen Organizations for Disaster Prevention Leader Training" and "Tokyo Disaster Management Seminars"

Training workshops have been held for leaders of disaster preparedness citizens' organizations, while disaster prevention experts have been dispatched to conduct seminars for improving disaster management capabilities in local communities.

2. Recognition of disaster preparedness citizens' organizations

Disaster preparedness citizens' organizations, which implement vigorous disaster preparedness activities in local areas, have been recognized. The recognised groups conduct various community-based activities such as implementing disaster preparedness training drills in collaboration with neighborhood associations and local junior high schools, and organizing mutual assistance systems in high-rise condominiums and so on.

3. Implementation of Women's Disaster Preparedness Seminar and Disaster Prevention Coordinator Training

We are training female disaster prevention personnel by launching seminars expected to be the foundation for expanding the base of female human resources in disasters and emergencies as well as workshops for fostering women who can play an active role in preventing disasters of the community and workplaces when they occur.



Section 1 Introduction

(6) Measures for Stranded Persons

Section 2 Preparation for Natural Disasters

Background of Measures for Stranded People

According to the damage estimates announced by the Tokyo Metropolitan Government in April 2012, a large-scale earthquake is expected to result in approximately 5.17 million stranded people who are unable to return home in Tokyo.

The metropolitan government encourages people to avoid moving around unnecessarily but rather remain at their workplace, school and so on for three days in order to alleviate mass movements of people returning home in the event of earthquake disaster. However, it is still estimated that there will be approximately 920,000 people who cannot get home, such as shoppers, and people who do not have a place to take refuge at their workplace or school.

Do not move about or go home unnecessarily

If the immense number of persons stranded by a large-scale earthquake all try to return home at once, the streets and pedestrian paths will be filled with people, producing mass congestion. This may prevent vehicles of the police, fire department, and Self Defense Forces from immediately reaching the affected areas, and may interfere with search & rescue activities during the first 72 hours that are critical to saving lives.

There is also the possibility of encountering secondary injury caused by aftershocks or other causes while walking home, and attempting to return home immediately after a large-scale earthquake is extremely dangerous.

When a large-scale earthquake occurs, remain at your office, travel destination, or other safe location and avoid moving about unnecessarily.



Roads around Shinagawa Station
(March 11, 2011)

TMG Ordinance Covering Measures for Stranded Persons Enacted

TMG has established measures promoting restraint of all people trying to return home all at once, securing temporary shelter, and support for returning home as the main pillars of “the TMG Ordinance Covering Measures for Stranded Persons.” The measures for stranded persons are not limited to public rescue and assistance, but include independent rescue and assistance efforts by individuals and businesses, because of the need for society-wide measures.

1. Preventing people from heading home all at once

Recommendations for citizens

- Refrain from heading home all at once.
- Prepare multiple methods of contacting family members.
- Check routes in advance and prepare comfortable walking shoes at your workplace in preparation for walking home after safety has been secured.

Recommendations for employers

- Prevent employees from heading home all at once.
- Stockpile three days' worth of drinking water, food, and other necessities.
- Prepare means of communicating with employees.
- Provide protection of users at railway stations and commercial facilities.

Recommendations for schools

- Keep students, children, and others in the school and ensure their safety.

2. Securing of temporary shelter

- Designate the Tokyo metropolitan facilities as temporary shelter.
- Request cooperation for securing temporary shelter from the national, municipal governments, and private business operators.

Stockpile Guidelines

Regardless of the type of employment (regular or non-regular), prepare a stockpile so that all employees working in the office can stay there for the 3 days' rescue and life-saving activities take place.

<Example of Stockpile Items>

Drinking water, food, blankets, thermal blankets, portable toilets, sanitary goods (toilet paper, etc.), mats (plastic sheets, etc.), portable radio, flashlights, batteries, first aid kit

* In addition to the above items, consider necessary stockpile items for your office taking into account elements of business continuity.

* Encourage employees and others to make their own stockpile. (athletic shoes, household medicine, mobile battery recharger for mobile phones)

3. Support Returning Home

- Securing of support stations for those attempting to return home during a disaster
- Securing of alternative transportation such as buses, ships, etc.



The sticker shown on the left is affixed to the premises cooperating as support stations for returning home during a disaster.

People can use water and bathrooms, and receive information during a disaster.

Securing Temporary Shelters

1. What is a Temporary Shelter?

This is a facility that can accept stranded persons who have nowhere to go, usually for a period of three days. To date, 200 TMG facilities have been designated as temporary stay facilities. They are equipped with enough drinking water and food to last for three days, portable toilets, and other supplies.

Temporary Shelters should whenever possible provide the following assistance.

- After the safety of the facility has been confirmed, accept stranded persons who have nowhere to go.
- Distribute water, food, blankets, and other aid supplies.
- Maintain the facility sanitation including toilets and trash.
- Collect information such as the damage conditions of surrounding areas and roads and train operating conditions, and provide information to the persons staying at the facility.

2. Cooperation is sought from private business owners in order to secure temporary shelters.

In the past, TMG has designated municipal facilities as Temporary Shelters, and although TMG has secured enough facilities for 70,000 people, there are limits to government institutions' abilities to provide stranded persons with public rescue and assistance. For this reason, TMG has cooperated with both the national government and local governments with the goal of securing the cooperation of privately owned businesses as Temporary Shelters. TMG is providing financial support to privately owned businesses willing to take in stranded persons, in order to help offset the costs of stockpiling items to be used by stranded persons and costs associated with maintaining facilities able to take in stranded persons, etc.

3. Vigorously cooperate with operation of Temporary Shelters

Temporary Shelters are secured through the cooperation of private operators. When stranded persons need to stay in such facilities, try to actively cooperate with running the facilities through helping with the reception of evacuees and distribution of supplies and so on.

Measures for Stranded Persons Training

Each winter, TMG holds measures for stranded persons training, centered around the main stations, as one of its four annual participatory training sessions. The training session includes training in protection of railway users on the premises, training in opening Temporary Shelters, training in transportation of persons needing assistance, and other practical training.



Protection of railway users by station operators



Transportation of persons requiring special assistance

(7) Storm and Flood Damage

The TMG Plan for Local Disaster Preparedness (Storm and Flood Version)

“The TMG Plan for Local Disaster Preparedness Measures (Storm and Flood Version)” was revised in July 2014.

Precautions

1. Flow control of rivers

To avoid flooding caused by typhoons and heavy rains, we are controlling river channels through measures such as river widening and river basin maintenance and retention pond adjustment for temporary flood storage.

2. Upgrades to Sewers

In addition to progressing on upgrades capable of handling rainfall of up to 50 mm/hour, upgrades to sewers are progressing at a higher standard than before in areas where there has been a major flood damage impact on large-scale underground walkways, areas where there has been serious flooding damage, and more.

3. Support for the Preparation of Flooding Hazard Maps

The municipalities are making easy-to-read flooding hazard maps, which indicate flood damage estimation and evacuation methods. TMG, together with relevant organizations, supports the municipalities in the preparation and release of these maps.

4. “Tokyo My Timeline”

“Tokyo My Timeline” has been created as a toolkit to prompt awareness of flood evacuation on a daily basis in order to help city residents correctly understand weather information and enable them to take evacuation measures that suit their environment and the characteristics of their region. The “Tokyo My Timeline” toolkit has been published on Tokyo Disaster Preparedness’s website, and a form allowing you to create and save My Timeline on your smartphone, PC, etc is also being launched.

5. “Flooding Risk Map”

By implementing the “Flooding Risk Map” function in the “Tokyo Disaster Preparedness App,” you are able to visually check and follow the flood risk forecast in Tokyo, such as the status of floods occurring in big, small and medium-sized rivers, floods caused by storm surges, and sediment disasters. You can now check the current status of flood risk in conjunction with the GPS function.

6. Subway Flooding Countermeasures

In order to prevent flooding from entrances/exits of subways, disaster prevention doors and watertight doors have been installed. Watertight doors have also been installed in tunnels in order to help limit damage in the event of flooding.



flip-up flood barriers

Measures for Heavy Rainfall

1. Flood Prevention Headquarters

When a heavy rain warning is announced in the Tokyo area, a flood prevention management center will be established, and in order to prevent and minimize losses and damages caused by floods, storm surges, etc., the level of rainfall and river water will be monitored. In cooperation with the Japan Meteorological Agency, a disaster prevention weather forecast will be announced and transmitted to related organizations such as local governors (flood prevention management organizations).

2. Establishment of Disaster Response Headquarters

When torrential rains or other warnings are announced in Tokyo, we take a stance of focusing on communicating information, and communicate and coordinate with the wards and municipalities. In addition, we set up a disaster response measures headquarters as necessary, and have a unified and flexible system.

3. Information Sharing by Municipalities with a Common River System

Municipalities with a common river system have a high chance of being flooded simultaneously; hence useful information regarding evacuation is shared with each other.

4. Wide area evacuation measures

In June 2018, Tokyo Metropolitan Government and the Cabinet Office together established the Review Committee on Wide Area Evacuations in Case of a Major Flood in the Capital Region. It is comprised of members from relevant organizations including the national government, municipalities within Tokyo Metropolis, neighboring prefectures, and transportation companies. The committee is responsible for holding discussions on realizing specific wide area evacuation in the event of a major flood in the Tokyo Metropolitan Area



5. Informing the Residents

○TMG Disaster Prevention Website and Disaster Prevention on Twitter

Through the TMG disaster prevention website and disaster preparedness on Twitter, damage information, train situations, traffic information, etc., are provided to Tokyo metropolitan residents and we support an initial prompt response in the event of a disaster and also support those who are outside and returning home.

○Communication of information such as an evacuation advisory

We provide information on evacuation orders, etc. to Tokyo residents by utilizing broadcast media when a disaster is forecast to possibly happen.

○Tokyo Metropolitan Government General Flood Prevention Information System Website and Flood Prevention on Twitter

Flood related information such as levels of rainfall and rivers measured in Tokyo, river monitoring video, weather forecast such as heavy rain warnings, flood forecast and sediment disaster warning, etc. are published in English, Chinese (simplified version), and Korean and updated in real time.

Tokyo Metropolitan Government General Flood Prevention Information System

[Version for PC] <http://www.kasen-suibo.metro.tokyo.jp>

[Version for Smart Phone] <http://www.kasen-suibo.metro.tokyo.jp/s/tsim040lg.html>

[Mobile phone version] <http://www.kasen-suibo.metro.tokyo.jp/k/>

[Tokyo Flood Prevention Twitter Account] https://twitter.com/tokyo_suibo



(Mobile phone version)



(Smartphone)



(Twitter)



(PC)

○Landslide Countermeasures (Information countermeasures)

Work being done to ensure smooth evacuations for citizens includes designation of areas with a risk of landslides as Landslide Watch Districts, assisting local administrative bodies in making landslide hazard maps, releasing landslide alert information, which will be one judgment for measurement of evacuation.

○Tokyo Amesh rainfall information system web site, created by the TMG Bureau of Sewerage

Weather radar is used to colorize the images of rain falling in and around Tokyo and provide rainfall information in real time. With the smartphone version, you can register your current location and any desired location using GPS.

[Smartphone/PC version] <https://tokyo-ame2.jwa.or.jp/>
<https://tokyo-ame.jwa.or.jp/>



(8) Measures for Volcanic Eruptions

In regard to Tokyo Metropolitan Government's volcanic disaster prevention measures, the Tokyo Metropolitan Regional Disaster Prevention Plan (Volcanoes), which is based on discussions by the Volcanic Disaster Prevention Committee as well as experiences from past volcanic disasters, establishes the following disaster prevention measures based on the characteristics of an offshore island.

Observation System for the Izu Islands

TMG has set up an observation system which includes seismographs and inclinometers on each of the Izu Islands (except for Izu Oshima) to monitor volcanic activities.

Izu Oshima is monitored by the national authorities through an extensive observation network. Data are shared by TMG, the Japan Meteorological Agency, the national authorities, and other research institutes.

Disaster Preparedness Training

In anticipation of volcanic eruptions, earthquakes, tsunami, etc., TMG jointly conducts general disaster preparedness training with the island municipalities.

2002: Oshima-machi
2004: Kozushima-mura
2006: Oshima-machi
2008: Hachijo-machi
Aogashima-mura
2010: Niijima-mura
2012: Kozushima-mura
2013: Niijima-mura
2015: Miyake-mura
Mikura jima-mura
2016: Oshima-machi,
Toshima-mura
2017: Hachijo-machi,
Aogashima-mura
FY2018: Ogasawara Village



2017: Tokyo, Hachijo-machi, Aogashima-mura joint general disaster drill

Eruption Alarms and Forecasts

The Japan Meteorological Agency publishes various information based on volcanic activities. For particularly active volcanos, it has established an eruption warning level that provides information about evacuations. The six targeted volcanoes in Tokyo have been forecast as follows: Izu Oshima in December 2007, Miyakejima in March 2008, Hachiojima and Aogashima in May 2018, Niijima and Kozushima in July, 2019. Based on these eruption alert levels shown in the table, the disaster preparedness measures will be planned. (Updated in July 2019: six targeted volcanoes: Level 1)

The detailed scope of regulations for each level is determined by the regional disaster preparedness plan of each municipality.

〔Volcanic eruption alert level of six targeted volcanoes〕

Type	Name	Applicable Range	Level (Keyword)	Volcanic Activity State	Actions to be Taken by Residents and Measures for People On and Around the Volcano
Special Warning	Eruption Warning (Residential area)	Residential areas and the nearby side of the crater	5 (Evacuate)	Eruptions that could have a large effect on residential areas are occurring or are getting ready to occur.	People must be evacuated from residential areas at risk.
			4 (Evacuation Preparation)	Eruptions that could have a large effect on residential areas are forecast to occur (The possibility is increasing).	For residential areas requiring a warning, make evacuation preparations and people requiring assistance during a disaster need to be evacuated.
Warning	Eruption Warning (Near the crater)	Wide area around crater from crater to residential	3 (Mountain restricted)	A volcanic eruption has occurred or is expected to occur which will seriously impact areas close to residential communities (entering this vicinity will endanger one's life).	Hiking ban, restricted hiking access, and restricted access to summit and dangerous areas. Depending on the condition, those requiring assistance during an evacuation may need to prepare for evacuation. Residents live their normal lives.
		From crater to nearby crater vicinity	2 (Crater vicinity restricted)	A volcanic eruption has occurred or is expected to occur which will seriously impact the crater area (entering this area will endanger one's life).	Access restrictions, etc. surrounding the crater. Residents live their normal lives.
Forecast	Eruption Forecast	Inside crater	1 (Bear in mind that it is an active volcano)	[Izu Oshima, Miyakejima, Hachiojima] Volcanic activity is calm. Depending on the condition of volcanic activities, an eruption of volcanic ash may be seen within the crater. (entering this vicinity will endanger one's life) [Aogashima] Volcanic activity is calm.	Access restrictions, etc. within the summit crater and its vicinity depending on the situation.

*The level changes depending on the activity state of the volcano.

Evacuation System

Quick and appropriate evacuation measures are crucial at times of volcanic eruptions, since cinders, lapilli, and lava flows can cause damage to wide areas and endanger lives. In case of an evacuation out of the island, it is important to secure boats through cooperation with relevant organizations and by requisition.

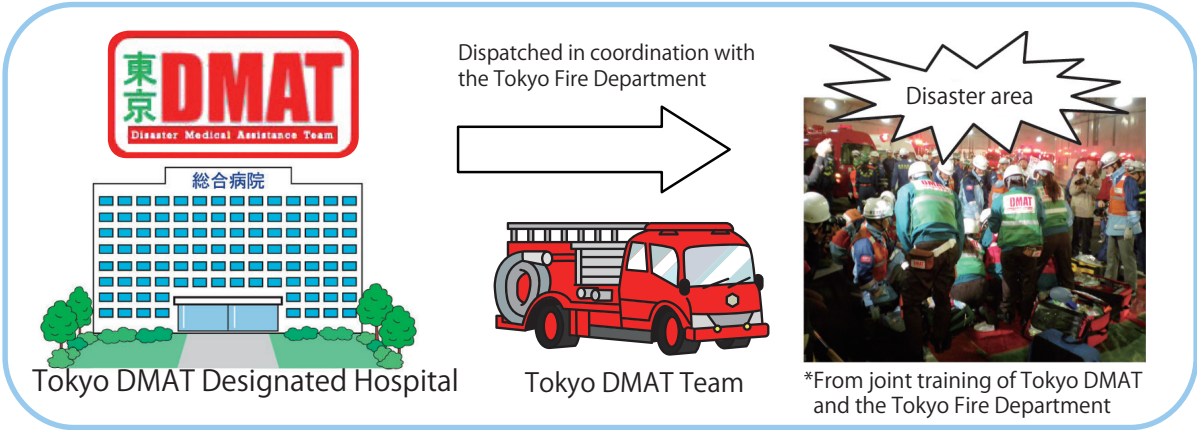
(9) Medical Relief Measures

So that it is possible to provide rapid and appropriate medical care to injured persons following a major earthquake or other disaster, TMG has constructed an information and communication system centered on the Tokyo Disaster Medical Assistance Teams (DMAT), Disaster Base Hospitals, and Disaster Medical Care Coordinators.

Tokyo DMAT

Tokyo DMAT are specially trained medical teams that are dispatched to disaster locations such as natural disasters and large traffic accidents in cooperation with the Tokyo Fire Department to provide emergency medical care as soon as possible.

To expand and strengthen the first response medical system, 25 hospitals in metropolitan Tokyo have been designated as Tokyo DMAT hospitals and approximately 1,000 team members have been trained. (As of April, 2018)



Disaster Base Hospitals

A system for disaster medical care has been constructed, with 82 hospitals designated (as of May 2018) as Disaster Base Hospitals that primarily accept and treat severely injured persons following a disaster. For the list of disaster base hospitals, see pages 28 and 29.

Disaster Medical Care Coordinator

In order to efficiently and effectively manage the limited medical resources based on the lessons learned from the Great East Japan Earthquake, TMG Disaster Medical Care Coordinators and Local Disaster Medical Care Coordinators who make adjustments in the entire Tokyo metropolitan areas and in the local areas have been appointed.

- TMG Disaster Medical Care Coordinator
 - Specific duties
 - Provide advice regarding the effective allocation of Tokyo DMAT and medical aid teams
 - Provide advice regarding TMG disaster medical care measures at normal times
- Local Disaster Medical Care Coordinators
 - Specific duties
 - Collect and centralize medical information within the Tokyo Metropolitan Area following a disaster, and control and coordinate medical aid activities and other activities.
 - Carry out the central responsibilities of the Local Disaster Medical Care Coordination Committee, which studies specific policies to suit local conditions, and construct a system for coordination with related institutions.

(10) Earthquake Disaster Reconstruction Measures

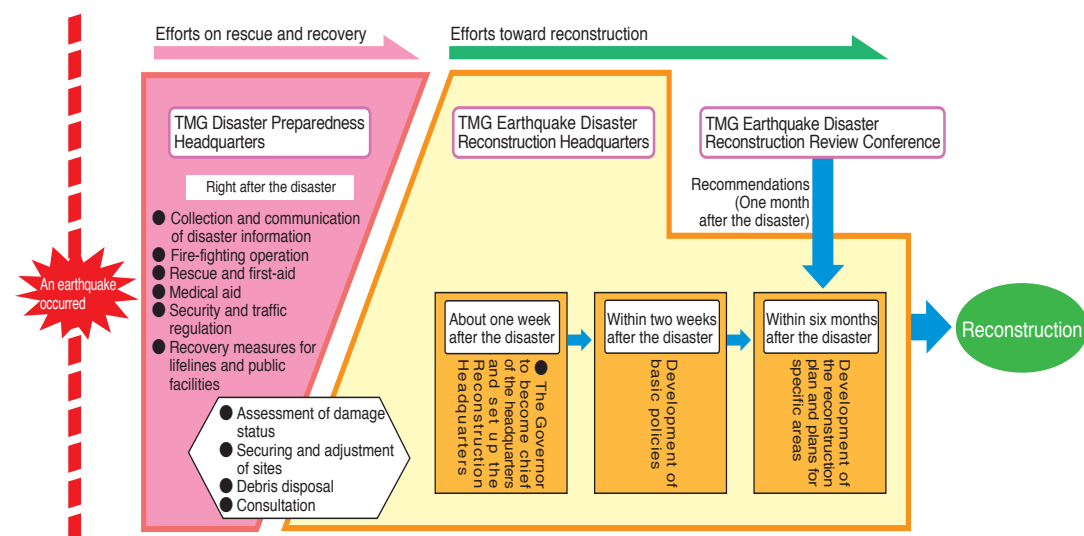
Earthquake Disaster Reconstruction and TMG Efforts

In the case of the Great Hanshin-Awaji Earthquake, some of the affected people could not return to normal life because they suffered significant mental and physical injury and their properties were significantly damaged. Also, a number of problems associated with the life of affected people occurred, such as housing, social and health services, environment, employment, and industry.

Based on the verification results of the Great Hanshin-Awaji Earthquake, TMG recognized that a mechanism of mutual assistance is important for the reconstruction and created the “TMG Earthquake Disaster Reconstruction Manual” (March, 2003) to propose a mechanism for new mutual assistance.

The manual consists of a “Reconstruction Policies and Measures Version,” which is a guidebook for the practical reconstruction operations for the responsible persons in administrative authorities and a “Reconstruction Process Version” in which various mechanisms to carry out the reconstruction by utilizing the strength of communities are proposed in order for the manual to become the affected people's action guideline.

Later, based on earthquake disaster reconstruction laws and ordinances after the Great East Japan Earthquake, TMG revised these measures in March 2016.



If the affected areas due to an earthquake extend to a substantial radius and it is assumed to take a substantial amount of time to carry out the earthquake disaster reconstruction, TMG will set up the Reconstruction Headquarters.

The headquarters is to be set up early, such as about one week after the disaster. The headquarters will clearly show the vision for metropolitan Tokyo after the earthquake disaster reconstruction, the vision for metropolitan Tokyo citizens, the goals to accomplish in the Earthquake Disaster Reconstruction Plan, project policies, etc., and promote specific earthquake disaster reconstruction projects.

Prompt Issuance of Victim's Certificate

The Victim's Certificate is a certificate issued by the municipal governments and states the confirmed degree of housing damage such as “Completely destroyed, large-scale partial destruction, partial destruction, some damage, etc.” after examining the affected houses. This certificate is required when applying for various support systems for affected people, such as monetary donations and the tax allowance.

TMG jointly developed a system to promptly issue Victim's Certificates with Kyoto University in FY2011 and has been supporting the municipal governments in introducing the system.

(11) Spreading Education on Disaster Prevention

“Disaster Preparedness Tokyo,” the Disaster Prevention Book

To promote an awareness of self-help and cooperation among residents and communities, we created a disaster prevention book titled “Disaster Preparedness Tokyo” in FY2005. This book contains such content as early preparation for various disasters, coping methods, and so on. It can be utilized every day in normal times and contains a variety of useful information.

In addition to providing multilingual support, such as publishing English and Chinese versions (Simplified Chinese and Traditional Chinese) and Korean, we have also created audio versions, braille versions, and large type versions and provided them to libraries in Tokyo.



“Disaster Readiness Guide”, A disaster prevention book with a female perspective

In order to encourage women to actively take part in disaster preparedness and to promote the readiness of Tokyo residents to fight a disaster much more seriously, a disaster preparedness book “Living in Tokyo with Disaster Prevention,” composed from the perspective of women, was published. It was distributed at municipal facilities within Tokyo in 2018.

The booklet provides concise yet easy to understand information about disaster preparedness measures that can be taken in each part of your life as well as life after a disaster, such as preventing crime when living in an evacuation shelter and living with pets, using real life stories from people affected by disasters. In order to make it possible for more people to read, including those with visual impairment, voice recording codes are listed on the lower left of each page, including multilingual support.



Disaster Preparedness Tokyo App

In order to promote the readiness of Tokyo residents to fight a disaster, “Tokyo Disaster Preparedness App” was released in 2018. Based on the concepts of “play”, “study”, and “use”, it was designed to help build primary knowledge of disaster preparedness while having fun with content which will be useful in a disaster. It is a convenient application with multilingual versions. This App contains 3 modes, “Tokyo Disaster Preparedness,” “Living in Tokyo with Disaster Prevention,” and “Disaster Mode,” which allow for enjoyable learning about disaster preparedness and can be useful during a disaster.



Disaster Preparedness Notebook -Disasters and Safety-

In order to help children, who will shoulder the next generation, make effective use of “Tokyo Disaster Preparedness,” and incorporate the contents of the “Living in Tokyo with Disaster Prevention,” the “Disaster Preparedness Notebook - Disasters and Safety -” was born as a disaster preparedness manual for children to take actions with their families. It is delivered to children and students at all schools in Tokyo and leads to better disaster preparedness education that integrates schools, families, and communities.

Along with the “Disaster Preparedness Notebook - Disasters and Safety -”, a new “Disaster Preparedness Education Portal” was launched. In addition to downloading “Disaster Preparedness Notebook - Disaster and Safety -”, children can also search for disaster preparedness experience locations, instructional materials for disaster preparedness education, safety education, etc., and view links to related organizations, etc. where they can make use of their learning. This content supports in promotion of disaster preparedness education for children and students at home and schools.



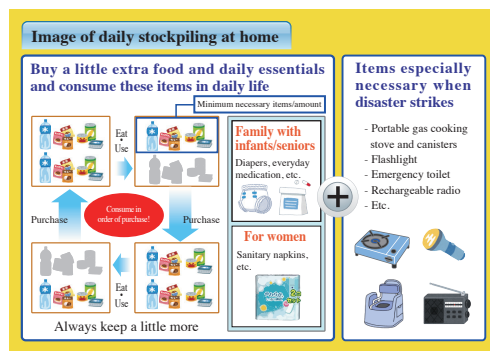
Stockpiles at Home to Prepare for Natural Disasters (Citizens' Stockpiling Project)

In the event of an earthquake directly hitting Tokyo or another natural disaster, lifelines will be cut, and roads and other transportation will be blocked by debris, paralyzing distribution systems and potentially making food and other everyday necessities difficult to obtain.

Under such circumstances, if your home has escaped destruction, TMG assumes that you would remain living there, rather than move to an evacuation center.

To prepare for such circumstances and to enable you to continue living at home in the event of a disaster, TMG is promoting stockpiling based on the concept of a "daily stockpile" that includes preparing a little more food and daily necessities so that you can continue living at home even if a large-scale disaster occurs.

For reference, the following shows recommendations for a family of four, and TMG encourages residents to make preparations tailored to the needs of their own households.



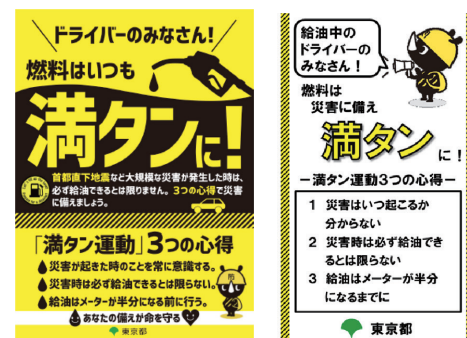
Full Tank Movement

In the event of a large-scale disaster like the 2011 Tohoku Earthquake and Tsunami (Great East Japan Earthquake) or the 2016 Kumamoto Earthquake, long lines were formed at gas stations of people waiting to refuel their vehicles. In particular, during the Great East Japan Earthquake, up to 120 cars were waiting at peak times even at gas stations in Tokyo.

It may not always be possible to refuel your car in the event of a large-scale disaster like an earthquake hitting directly under the Tokyo Metropolitan area. In preparation for dealing with such a situation, this campaign is meant to increase awareness of the importance of frequently filling up the vehicle fuel tank.

What's necessary? Key Items	
(Model family: A family of four—husband, wife, infant and elderly woman) Estimates for about 3 days to 1 week	
Supplies for everyday use (to always be stocked)	Supplies for a disaster
Items that disaster survivors have found valuable: <input type="checkbox"/> Water (3 liters a day per person) <input type="checkbox"/> Portable gas cooking stove: 1; canisters: 6 <input type="checkbox"/> Medicine, non-prescription drugs: 1 box each	<input type="checkbox"/> Emergency toilet: 5 units a day per person <input type="checkbox"/> Flashlight: 2 <input type="checkbox"/> Batteries <input type="checkbox"/> Hand-rechargeable or other type of radio
Food <input type="checkbox"/> Staples: Pre-washed rice: 5 kg; heat-and-eat rice: 6; dried noodles: 1; instant noodles: 3 <input type="checkbox"/> Main dish: Canned food (e.g. miso-steamed mackerel, vegetables): 6 each <input type="checkbox"/> Heat-and-eat food: 9 <input type="checkbox"/> Canned food (fruit, etc.): 1 <input type="checkbox"/> Vegetable juice: 9 <input type="checkbox"/> Drinks: 6,500 ml bottles <input type="checkbox"/> Cheese, "kamaoka" steamed fish paste, etc.: 1 pack each <input type="checkbox"/> Snacks: 3 <input type="checkbox"/> Nutrition bars: 3 boxes; powdered health drink: 1 bag <input type="checkbox"/> Seasonings: 1 set	Save gas by preparing items that heat quickly. Can be eaten without heating. Provides vitamins and minerals lost from the lack of vegetables. Can be eaten without heating.
Daily items <input type="checkbox"/> Large plastic bag, garbage bag: 30 each <input type="checkbox"/> Plastic bag <input type="checkbox"/> First-aid kit <input type="checkbox"/> Plastic wrap: 1 <input type="checkbox"/> Tissue paper: 5 boxes <input type="checkbox"/> Toilet paper: 12 rolls <input type="checkbox"/> Disinfecting wet wipes: 1 box (about 100) <input type="checkbox"/> Disposable contact lenses: 1-month supply <input type="checkbox"/> Disposable body warmer: 10 <input type="checkbox"/> Ignition stick: 1	Can be used to carry water from a water supply point, or for an emergency toilet. <input type="checkbox"/> Spare battery for mobile phone: 3 (the number of mobile phones) <input type="checkbox"/> Latex gloves: 1 box (about 100) Can keep your hands clean during cooking. Can be used to place a transparent plastic sandwich. Can also be used to cover plates, and for just changing the wrap, dishes need not be washed.
For women <input type="checkbox"/> Sanitary napkins: about 60	
For infants <input type="checkbox"/> Powdered infant formula: about 20 single packets (allergen-free) <input type="checkbox"/> Baby food: at least 1-week supply (allergen-free) <input type="checkbox"/> Baby wipes: 1 pack <input type="checkbox"/> Diapers: about 70	
For the elderly <input type="checkbox"/> Rice gnet or other soft food, food for the elderly: at least 1 week supply <input type="checkbox"/> Medicine (prescription drugs): 1-month supply <input type="checkbox"/> Battery for hearing aid: 6 <input type="checkbox"/> Denture cleaner: about 30	

Based on the above list, prepare your own set of items that meet the needs of your household. First try to prepare a stock for 3 days, then a week or more!



Posters and Leaflets to improve awareness Back side of rolled receipt papers

Section 3 Other Crisis Management

1. New Influenza Virus

New Influenza Virus

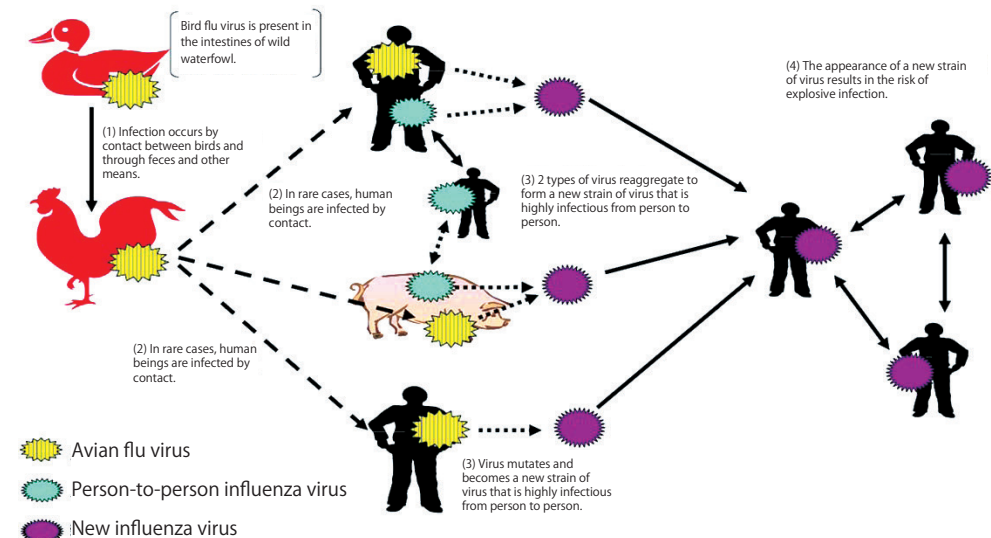
A new type of influenza Virus is that has never been infected by humans in the past. The H1N1 strain of influenza (A/H1N1) that occurred in April 2009 was fortunately not very pathogenic, but shifted to a seasonal influenza at the end of March 2011.

However, overseas infections affecting humans such as avian influenza (A/H5N1, A/H7N9) have been confirmed, and there are concerns that such viruses may mutate into a novel influenza.

Since many humans do not have immunity to the H1N1 influenza, there are concerns that a pandemic could occur around the world, resulting in extensive harm to human life as well as to social and economic activities.

Symptoms

New influenza viruses are thought to basically have similar initial symptoms, i.e. high fever, coughing, etc., as other forms of influenza. However, highly pathogenic strains of new influenza originating out of avian influenza (A/H5N1, A/H7N9) are more likely to cause fatalities, and there is concern over the mass health impact such strains could impart.



Projected damage in case of new influenza epidemic

Name	Tokyo	Japan
Outpatients	3,785,000	approx. 13,000,000 to 25,000,000
Inpatients	291,000	approx. 530,000 to 2,000,000
Deaths	14,000	approx. 170,000 to 640,000

Past Influenza Pandemics

Name	Spanish Flu	Asian Flu	Hong Kong Flu	New Influenza (A/H1N1)
Pandemic dates	1918 – 1920	1957 – 1958	1968 – 1969	From April 2009
Number of deaths worldwide	20 – 50 million	1 – 4 million	1 – 4 million	At least 18,449*
Virus type	A/H1N1	A/H2N2	A/H3N2	A/H1N1

* As of August 1, 2010

Routine Preparation

1. Let's routinely strive to prevent influenza infections

The following are general measures for preventing infections from infectious diseases such as new strains of influenza.

- Practice good cough etiquette.
 - (1) Put on a mask, when there are symptoms like coughing.
 - (2) Cover mouth & nose with tissue, when coughing, sneezing.
 - (3) Turn your face away from the people around you.
- Wash your hands when returning from outside.
- Keep indoor environments at a proper humidity and ventilated.
- Live a healthy lifestyle and get proper rest.
- Eat nutritionally balanced food and drink enough fluids.
- Only go outdoors when necessary and avoid crowds as much as possible.



2. Stockpile supplies

During the peak infection period, it is believed that up to 40% of persons will be forced to take time off work because they have fallen ill or must take care of ill family members. This could potentially reduce the availability of a wide range of services including government services, public transportation, and logistics. As a routine matter, you should stockpile food, masks, and other supplies in addition to making preparations for natural disasters.

If a new strain of influenza occurs

1. In case of an outbreak overseas

- Pay attention to information about outbreaks of new strains of influenza announced by the government and local administrative bodies, and about travel to and return from countries where such an outbreak has occurred.

2. In case of an outbreak in Japan

- Take complete steps to prevent infection and follow the instructions of the government, local administrative bodies, and medical institutions.
- Obtain information from sources such as television, radio, and the websites of the of the government and local administrative bodies.
- If you think you may be infected (subjective symptoms such as a fever of 38° C or higher or cough), call the health center or other institution in advance and promptly seek examination by a medical institution.
- Anybody may become infected. Do not abuse or slander infected persons.



If the government has declared a state of emergency, the government may request that people refrain from leaving their homes unnecessarily except in emergency, and that operation of theaters, events, etc. be restricted. Please accept and cooperate with these requests.

In case of a new influenza outbreak, the World Health Organization (WHO) will identify the countries with outbreaks, and notify all nations. After the outbreak has been identified, the Japanese government will take measures to prevent the spread of infection by monitoring airport and port facilities for those arriving from areas of outbreak. When a new influenza virus has been confirmed in Japan, hospitalization recommendation measures will be taken and examine at the specialized medical institution in accordance with the Infectious Diseases Control Law. However, if further infection spreads and the number of patients increased, carefully check.

Efforts by TMG

In December 2005, TMG formulated the TMG New Influenza Response Action Plan, and is stockpiling anti-viral drugs and other supplies. Based on the lessons of the new strain of influenza (A/H1N1) that occurred in April 2009, it has also formulated “the TMG BCP (New Influenza Version)” so that the government can continue to operate with limited staff, and has taken other steps in preparation for an outbreak of a new strain of influenza.

“The Act on Special Measures for Pandemic Influenza and New Infectious Diseases” was enacted in April 2013 to further improve the effectiveness of the response to an outbreak. Under this law, when the government has declared a state of emergency during an outbreak, TMG may request that people refrain from leaving their homes, close schools, restrict the use of facilities where people gather, and request the sale of medicines and food to TMG. The law also prescribes vaccine immunizations of residents by local governments.

Following the enactment of the special measures act, the Tokyo Metropolitan Government established the Ordinance on New Type Influenza Response Headquarters in March 2013 and put into place a framework to address outbreaks of new types of influenza. In addition, the city's currently existing action plan, new-type influenza response manual, and municipal government BCP (new-type influenza version) have been integrated, and new items stipulated by an Act on special measures have been added, and the Tokyo Metropolitan Influenza Measures Action Plan was established in November 2013 and partially revised in July 2018.

Primary measures of the Tokyo Metropolitan Plan of Action Against New Strains of Influenza	
1 Surveillance and collection of information	Construct a surveillance system and collect and analyze information. Conduct surveillance as appropriate for the stage of an outbreak.
2 Information provision and sharing	Rapidly provide information to Tokyo residents and companies (Websites, Twitter). Strengthen coordination with local governments, medical institutions, and other related institutions.
3 Consultations for Tokyo residents	Establish a New Influenza Consultation Center. Offer consultation regarding preventing catching the infection and other matters.
4 Preventing wider infection	Enact border measures and measures to prevent infection at facilities where the infection risk is high. Call for individual infection prevention measures and voluntary restrictions on events.
5 Preventive vaccination	Cooperate with businesses and other agents registered by the national government to carry out designated vaccinations. Provide support for vaccinations of residents by local governments.
6 Medical care	Secure medical institutions willing to cooperate in treating infectious diseases, and stockpile drugs and other supplies. Establish Outpatient Specialty Clinics for New influenza.
7 Ensuring stability of Tokyo resident lives and economic activity	Ensure stable supply of food and daily essentials Request for cooperation to assist vulnerable persons sent to municipalities
8 Maintenance of city functions	Maintain lifelines, public transportation, and administrative functions. Secure safety and security for Tokyo residents.

Training in cooperation with related agencies, local governments, and other parties will be conducted, and other efforts made to improve response capabilities, in the future.

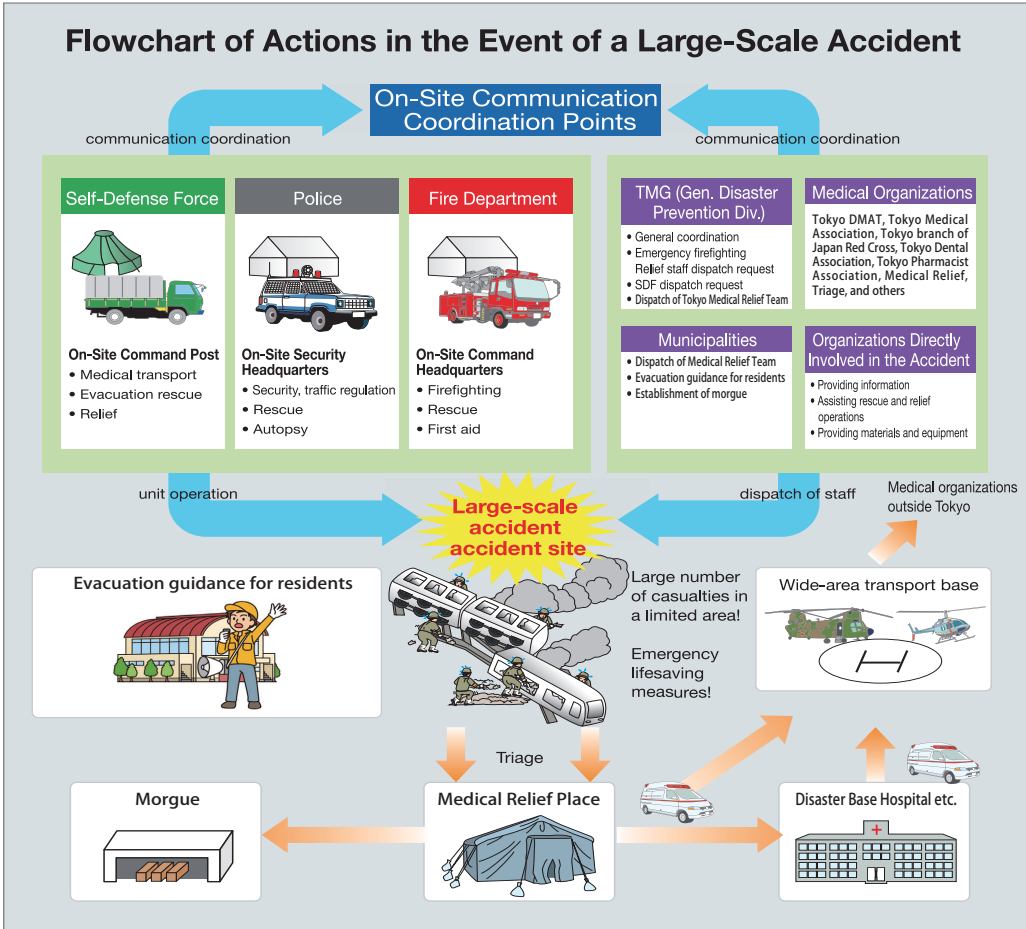


New Strain of Influenza Response Drill

2. Large-Scale Accidents

Large-Scale Accidents

The Tokyo Metropolitan Government has prepared to take actions in case large numbers are killed or injured due to (1) large-scale fires, (2) accidents caused by dangerous materials such as high-pressure gas, and (3) accidents involving transportation such as ships, airplanes, and railways. In the "Tokyo Disaster Prevention Plan (Large-scale accidents)," general measures have been established from prevention to emergency measures and recovery methods.



"Disaster Prevention Measures at Petrochemical Complexes, etc."

At Tokyo International Airport (Haneda Airport), the amount of gasoline stored and handled by operators refueling to aircraft exceeded a certain amount, so in August 2018, the "Tokyo International Airport Area" was designated as a special disaster preparedness area (an petrochemical complex) according to the Disaster Prevention Act for Petrochemical Complexes.

In response, the Tokyo Metropolitan Government established the Tokyo Petrochemical Complex, etc. Disaster Prevention Headquarters based on the "Tokyo Metropolitan Petroleum Complex Disaster Prevention Headquarters Ordinance", which came into effect in October 2018. In addition to eliminating the occurrence and spreading of disasters in special disaster preparedness areas, we are taking measures to set up disaster preparedness plans, etc., to protect the lives and properties of the residents in related areas.

Nuclear Disaster Preparedness Measures

In preparation for the occurrence of a nuclear emergency situation at a nuclear power facility near Tokyo, TMG has stipulated countermeasures such as upgrading information provision system in the "TMG plan for Local Disaster Preparedness (Nuclear Disaster Version)."

In November 2012, based on the lessons learned from the Great East Japan Earthquake, measures were added for a situation in which the effects of radioactive substances due to a nuclear disaster were to occur in Tokyo.

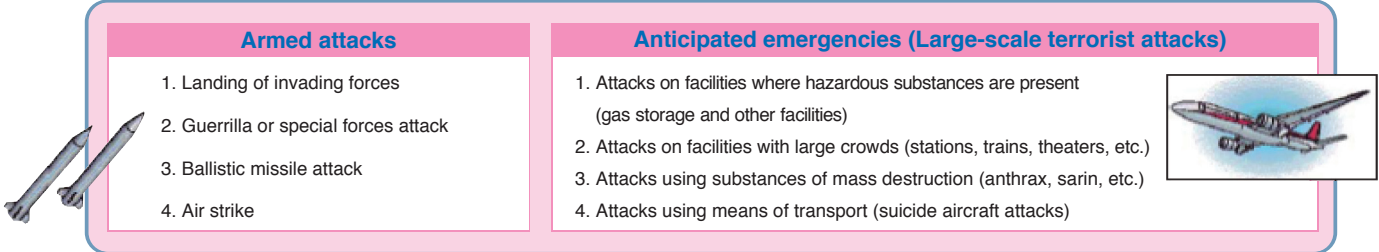
Main Activities

- Measuring air radiation levels and radioactive materials in water, food products, etc., and provision of information
- Establishing health consultation stations and measuring external exposure dose at public health institutes and the Tokyo metropolitan hospitals
- Preventing harmful rumors about agricultural crops, industrial products, etc.

3. Armed Attacks

Definition of Armed Attack

"Armed attack" refers to a military attack by a foreign power (armed attacks) or large-scale terrorist attack (anticipated emergencies) with the potential to cause large damage to the lives and health of many people.



Tokyo Metropolitan Civil Protection Plan

Following the enactment of the Armed Attack Situations Response Act in 2003, the Civil Protection Law was enacted in 2004 and establishes a system for cooperation between the national government and prefectural and local governments to evacuate and assist residents, and take other action to protect the citizens of Japan, in the event of an armed attack by a foreign power, large-scale terrorist attack, or similar event.

In preparation for the possibility of an armed attack by a foreign power, large-scale terrorist attack, or similar event, TMG formulated the Tokyo Civil Protection Plan in 2006 in order to carry out rapid and accurate measures to protect citizens, and is working during ordinary times to collect risk information, to warn, strengthen initial response, and make other improvements. In the event of a terrorist attack, based on the identification of the situation by the national government, TMG will cooperate with local governments, police and fire departments, and other related agencies to evacuate and assist residents.

Activities During Ordinary Times

- TMG will monitor for any signs of terrorism, gather crisis information and remain on constant alert.
- TMG will work with municipalities, businesses, and others in conducting role-playing and on-site drills.
- TMG has established the Business Operators Liaison Conference for the Crisis of Terrorism which is to enhance a crisis management system and cooperation, as well as to share information, with businesses managing large-scale customer facilities and has been enhancing cooperation by holding seminars.

Measures in case of a Terrorist Attack or Armed Attack

- Municipalities inform warnings to residents through J-ALERT emergency broadcast system and disaster Radio System.
- Related agency and coordination center will be set up on site to respond promptly and accurately according to local conditions.
- TMG will make a cautionary request to lifeline companies and a request for suspension of train operations to prevent the spread of damage.



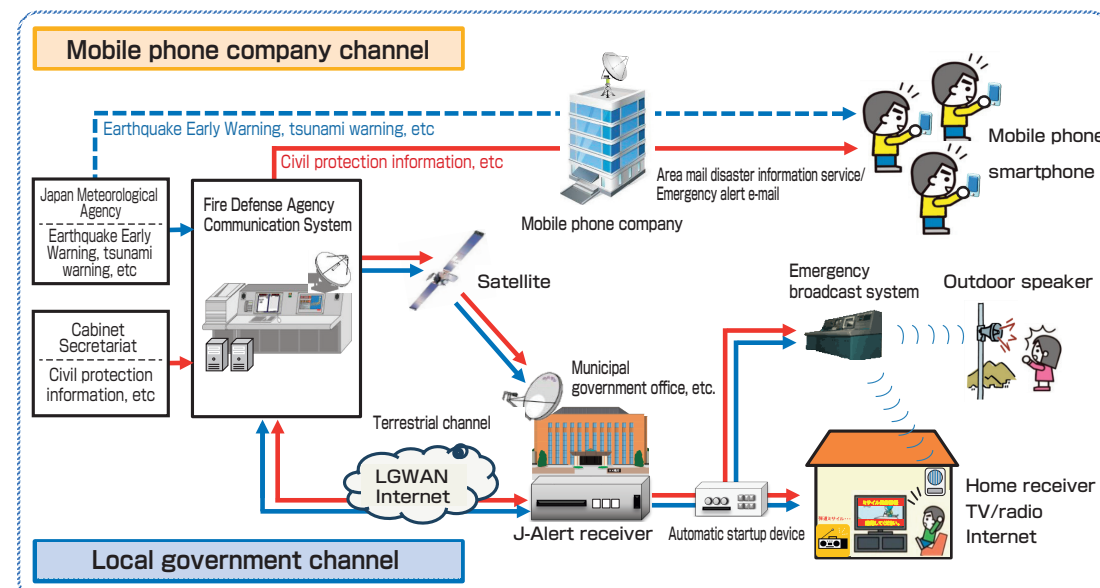
Tokyo Citizens Protection Joint Map Training 2017



Tokyo/Koto-Ward Citizens Protection (Large-Scale Terrorism Disaster Countermeasures) Training 2018

J-Alert nationwide instantaneous warning system

A system that instantaneously delivers information about emergency situations in which time to react is minimal, such as ballistic missile information, Earthquake Early Warnings, and tsunami warnings, from the government to residents by means of municipal emergency broadcast systems or emergency alert e-mails to mobile phones



Source: "Overview of J-Alert," Fire and Disaster Management Agency, Ministry of Internal Affairs and Communications

Section 4 Tokyo Metropolitan Government Crisis Management System

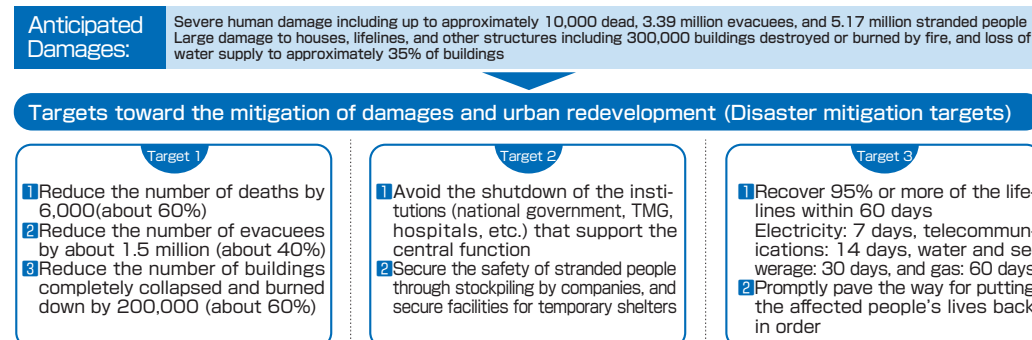
1. The TMG Plan for Local Disaster Preparedness Measures

The TMG Plan for Local Disaster Preparedness Measures is a plan that was formulated by the Tokyo Disaster Prevention Committee based on the Disaster Countermeasures Basic Act, containing the Earthquake Version, Storm and Flood Version, Volcano Version, Large-scale Accident Version, and Nuclear Power Disaster Version. The purpose is to carry out preventive measures, emergency response, reconstruction measures, and other measures related to an earthquake or other disaster, and to protect the lives, health, and property of Tokyo residents.

In November 2012, a drastic review of this plan was undertaken, based on the public announcement in April 2012 of damage estimates for an earthquake directly beneath Tokyo and other disasters, as well as lessons learned from the Great East Japan Earthquake. Later, in May 2013, damage estimates to Tokyo from Nankai Trough and other earthquakes were assembled, and, based on these and the Amendment of the Act on Special Measures for Promotion of Nankai Trough Earthquake Disaster Management, in July 2014, a revision to the earthquake portion was made, focused on Nankai Trough earthquake countermeasures. Likewise, in July 2014, the storm and flood damage portion was revised, based on the lessons learned from the landslide disaster that occurred on Izu Oshima in October 2013.

Furthermore, the "Volcano Section" was modified in December 2018 based on the results of a study by the Volcano Disaster Prevention Committee, based on the Active Volcano Response Special Measures Act.

Main Contents of the Tokyo Metropolitan Area Disaster Prevention Plan (Earthquake Version)



2. Safe City - Tokyo's Disaster Preparedness Plan

The Safe City Tokyo Disaster Preparedness Plan was established in March 2018 as a project plan leading up to 2020 in order to ensure local residents, communities, businesses and government promptly implement disaster preparedness initiatives in advance to prepare for natural disasters such as earthquakes, strong winds, and volcanic eruptions. During the planning stage, a Progress Report will be created every year, and the progress of the initiatives, etc. set forth in the "Safe City - Tokyo Disaster Prevention Plan" will be clarified.

Looking ahead, Tokyo Metropolitan Government will continue to regularly implement disaster preparedness measures, while taking into account the latest initiatives at the national and municipal levels.

Evacuation Actions

In addition to ballistic missiles, we must also consider other terrorist attacks that may include the use of bombs to cause explosions or other substances that may cause mass deaths ("NBCR" N: nuclear materials, B: biological agents, C: chemical agents, R: radioactive materials).

In the case of NBCR terrorism in particular, the response to take depends on the substance used for the terrorism act. If an act of terrorism actually occurs, it is important to try to get information from the television, radio, etc., follow the instructions from the government, and to act calmly.

1. In the case of ballistic missiles

If you are outdoors, evacuate to nearby buildings or underground shopping areas. If you are indoors, move away from windows or go into a room without windows.



2. In the case of an explosion

If an explosion occurs, quickly keep low to the ground and hide yourself under a sturdy table. Explosions may occur several times, so evacuate to a safe place.



3. In the case of a nuclear explosion or radioactive contamination

If a nuclear explosion occurs, hide behind something as a shield and evacuate to an underground facility or a sturdy building.

Also, an explosion caused by a so-called dirty bomb can cause radioactive contamination after it lands, so receive an examination from a doctor according to instructions from government agencies.



4. In the case of a chemical or biological agent attack

Cover your mouth and nose with a handkerchief, and move away from the site of the attack immediately. Go to a safe location that is not likely to be contaminated, such as inside a tightly sealed building or an upwind high ground area.

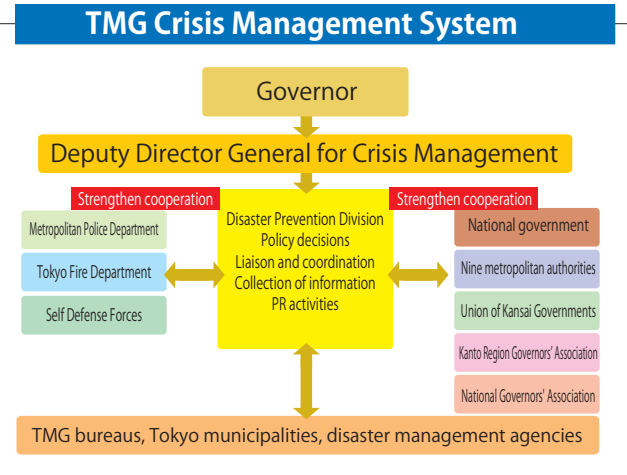


3. TMG Crisis Management Systems

TMG Crisis Management System

To protect the lives and properties of metropolitan Tokyo residents from immediate danger, TMG was the first among local governments nationwide to establish a crisis management organization in April 2003 to strengthen its response structure to man-made disasters, such as terrorism, in addition to natural disasters.

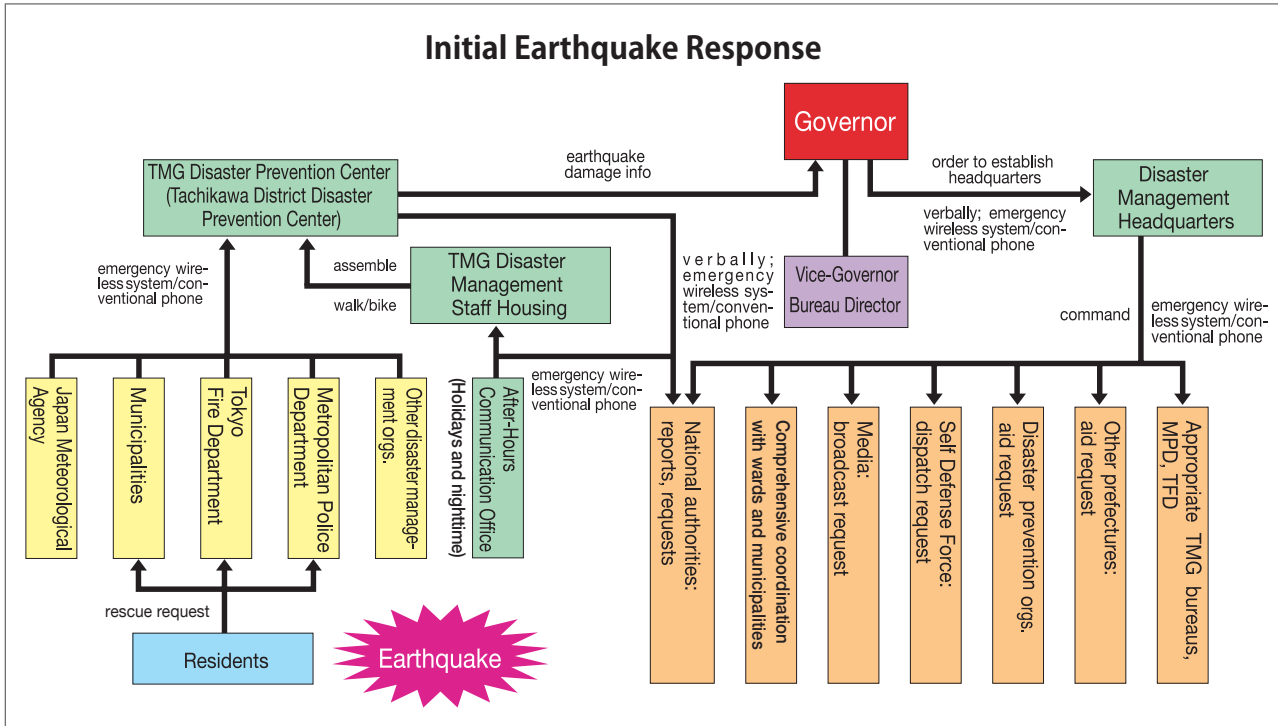
The Deputy Director General for Crisis Management receives instructions directly from the governor when a disaster occurs and correlates with the bureaus in the TMG and shares information with the municipalities and related organizations.



Disaster Management by TMG

In the event of a disaster, TMG staff will take action as first responders in accordance with prearranged standards and quickly assemble in their workplaces, including the Tokyo Disaster Prevention Center.

Priority will be given to humanitarian responses such as gathering and distributing disaster information, firefighting, rescue and first aid, regulating traffic to secure transportation routes, evacuation and protection of residents. TMG will coordinate with government of Japan, municipalities, the Metropolitan Police Department, the Tokyo Fire Department and disaster prevention related organizations to carry out emergency measures. TMG will also request disaster relief from the Japan Self-Defense Forces.



Mutual Support and Cooperation

1. When an earthquake causes extensive damage over a wide area, efforts by TMG organizations alone may not be sufficient. To prepare for such cases, TMG has a mutual support agreement with the neighboring local authorities regarding the distribution of daily necessities such as food and water, as well as provision of medical care.

Nationwide Agreement on Wide-Area Support in Times of Disaster between Prefectures (signed in July 1996)
Agreement on mutual support in large-scale urban disasters (concluded in October 1986)
Agreement on Mutual Support at Times of Disaster between Tokyo and 9 Prefectures (Kanto Region Governors' Association) (signed in June 1977)
9 Metropolitan Authorities Agreement for Mutual Support During Disasters (Concluded in April 2010)
Agreement between the Union of Kansai Governments and 9 Metropolitan Authorities for mutual support during disasters (Concluded in March 2014.)



9 Metropolitan Authorities Agreement



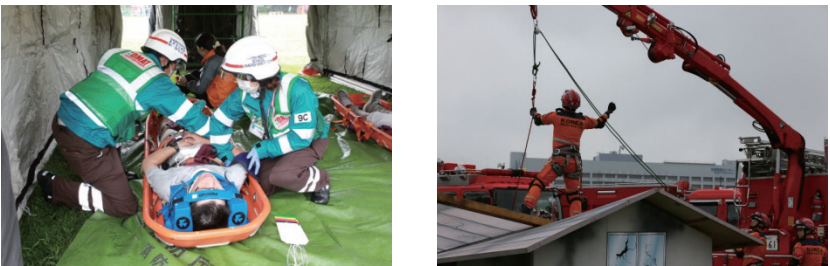
Union of Kansai Governments

2. Other mutual cooperation systems by TMG include: dispatch of medical staff by the Tokyo Medical Association, and agreements with private-sector organizations for providing daily necessities, building supplies, construction of temporary housing, etc.

4 Disaster Preparedness Training

Significance of Disaster Preparedness Training

In order not to spread damage during a disaster, preparations on a routine basis are important. In the disaster preparedness training conducted by the TMG, we strive to implement practical training with emphasis on hands-on training with participation of residents in firefighting and rescue activities, and we aim to improve disaster preparedness capabilities while deepening cooperation with the citizens of Tokyo, municipal governments and the disaster preparedness authorities concerned.



Scenes from the comprehensive disaster prevention training

Disaster Preparedness Training Held

Major Training		Achievements
On-Site Training	Spring: Storm and flood countermeasure training	The TMG jointly conducted general disaster preparedness training in each fiscal year with the following municipalities: 2006: Adachi-ku and Oshima-machi 2007: the cities of Akishima-shi, Fussa-shi, Musashimurayama-shi, Hamura-shi, and Mizuho-machi 2008: Chuo-ku, Koto-ku, Hachijo-machi, and Aogashima-mura 2009: Setagaya-ku and Chofu-shi 2010: Bunkyo-ku and Nijima-mura 2011: Kodaira-shi, Nishitokyo-shi, Musashino-shi, and Koganei-shi 2012: Meguro-ku and Kozushima-mura 2013: Akiruno-shi and Nijima-mura 2014: Suginami-ku, Miyake-mura and Mikurajima-mura (Canceled) 2015: Tachikawa-shi, Miyake-mura and Mikurajima-mura 2016: Sumida-ku, Katsushika-ku, Oshima-machi and Toshima-mura 2017: Chofu city, Hachijo-machi and Aogashima-mura 2018: Chuo City/Minato City, Ogasawara Village 2019: Tama City Major Participants TMG, municipalities, Metropolitan Police Department, Tokyo Fire Department, Self-Defense Force, Japan Coast Guard, lifeline companies, road contract companies, physical distribution companies, etc.
	Summer: General disaster prevention training	
	Fall: Island general disaster prevention training	
	Winter: Measures for stranded individuals countermeasure training	
	Other: Staff emergency attendance training Large-scale terrorist attack countermeasure training (includes on-map training) New influenza virus countermeasure training (includes on-map training)	
Role-playing/ Correspondence Training	Periodic disaster communications training	
	Tokyo on-map training	
	9 Metropolitan Authorities on-map training (held once every two years)	

Practical disaster preparedness training at municipal high schools

Two-day disaster preparedness training

This has been implemented at all metropolitan high schools since fiscal 2012 with the goal of educating people that during a disaster they must first protect their own life before helping others. It also intends to foster a sense of self help and mutual aid in people so that they can contribute to disaster preparedness activities in their community, such as helping run the local evacuation shelter.

At each school, a disaster preparedness organization comprised of students that carries out planning and proposals of the school's disaster preparedness initiatives mainly participate to learn about the response and mindset during a disaster. Learning takes the form of initial fire response training and first aid training, etc., conducted with the community and outside institutions such as the fire department, police department, Bureau of Waterworks, Japanese Red Cross Society and/or Ministry of Defense, as well as food stockpile training and overnight training held at the school.

Also, at metropolitan schools for students with special needs, the number of schools implementing training, which takes into account each school's situation and extent of student's disabilities, has been expanded in stages beginning from fiscal 2014. From fiscal 2017, a two-day one-night overnight disaster preparedness training program is being held at all metropolitan schools for students with special needs. This training focuses on initiatives closely tied to the community and related institutions.



Emergency transport using blankets



Smoke house experience



Earthquake experience vehicle

Section 5 Reference Materials

Major Past Disasters in Tokyo

Earthquake			
Date	Disaster name	Main damage	Remarks
April 6 - 11, 1967	Cluster of earthquakes near Kozu Island	3 minor injuries, 16 buildings totally / partially destroyed, etc.	
February 29, 1972	Earthquake off Hachijo Island	3 minor injuries, etc.	
January 14, 1978	Earthquake off Izu Oshima Island	211 buildings damaged	
June 29, 1980	Earthquake off the east coast of Izu Peninsula	Measuring 5 on the JMA seismic intensity scale on Izu Oshima Island, and 4 in Tokyo	
September 24, 1980	South West Ibaraki Earthquake	1 seriously injured, 3 with minor injuries	
September 25, 1980	Central Chiba Earthquake	1 dead, 32 with minor injuries	
March 6, 1984	Earthquake off Torishima Island	1 with minor injuries	
October 4, 1985	Ibaraki-Chiba Border Earthquake	5 persons severely injured, 10 persons with minor injuries	
December 17, 1987	Earthquake off east of Chiba	3 seriously injured, 7 with minor injuries	
March 18, 1988	Eastern Tokyo Earthquake	1 seriously injured, 6 with minor injuries	
March 6, 1989	Northern Ibaraki-Chiba Earthquake	1 person with minor injuries	
February 20, 1990	Earthquake off Izu Oshima Island	1 seriously injured	
February 2, 1992	Tokyo Bay Earthquake	5 on the JMA seismic intensity scale in Tokyo, 22 injured	
June 15, 1992	Kozu Island Earthquake	1 with minor injuries, 5 on the JMA seismic intensity scale in Kozu Island	
October 12, 1993	Earthquake epicentered off Tokaido	1 dead, 2 seriously injured, 2 with minor injuries	
December 19, 1995	Earthquake off south-west of Izu Peninsula	5 on the JMA seismic intensity scale in Kozu Island	
March 14, 1999	Earthquake in waters near Kozu Island	5-lower on the JMA seismic intensity scale in Kozu Island	
July 1, 2000	Earthquake in waters off Izu Islands	1 dead, 1 seriously injured, 13 with minor injuries, 34 buildings total / partially destroyed	
July 5, 2001	Cluster of earthquakes off Aogashima Island	Road damage at 4 locations	
May 12, 2003	Southern Ibaraki Earthquake	2 with minor injuries	
September 20, 2003	Earthquake off east of Chiba	8 with minor injuries	
October 15, 2003	Earthquake off northwest of Chiba	2 with minor injuries	
October 7, 2004	Southern Ibaraki Earthquake	1 with minor injuries	
July 23, 2005	Earthquake off northwest of Chiba	1 seriously injured, 11 with minor injuries, 4 buildings partially damaged	
August 11, 2009	Earthquake in Suruga Bay	1 with minor injuries	
March 11, 2011	Great East Japan Earthquake	Seismic intensity level 5-upper in Tokyo, 7 persons killed, 117 persons injured, 17 buildings completely destroyed, 195 buildings partially destroyed	Disaster Relief Act was invoked.
May 5, 2014	Earthquake off Izu Oshima Island	5-lower on the JMA seismic intensity scale in Chiyoda-ku, Tokyo, 3 with minor injuries	
May 30, 2015	Earthquake off west of Ogasawara Islands	5-upper on the JMA seismic intensity scale in Ogasawara-mura, 3 with minor injuries	
September 12, 2015	Earthquake in Tokyo bay	5-lower on the JMA seismic intensity scale in Chofu-shi, 1 seriously injured, 5 with minor injuries	

Major Past Disasters in Tokyo

Wind / flood damage			
Date	Disaster name	Main damage	Remarks
September 16-18, 1965	Typhoon #24	6 dead, 3 seriously injured, 7 with minor injuries, 14 buildings totally / partially destroyed (across Tokyo)	
June 27-28, 1966	Typhoon #4	2 dead, 1 missing, 2 seriously injured, 4 with minor injuries, 32 buildings totally / partially destroyed (across Tokyo)	Disaster Relief Act was invoked.
September 24-25, 1966	Typhoon #26	5 dead, 24 seriously injured, 289 with minor injuries, 3,311 buildings totally / partially destroyed (Tama region)	Disaster Relief Act was invoked.
August 31, 1971	Typhoon #23	3 dead, 1 building partially destroyed (central and Tama regions)	Disaster Management Headquarters established
July 20, 1974	Thunderstorm	1 dead, 2 with minor injuries, 3 buildings partially destroyed (central and Tama region)	
July 7, 1977	Thunderstorm	1 dead, 1 with minor injuries, 2 buildings partially destroyed (Tama region)	Disaster Relief Act was invoked.
October 19, 1979	Typhoon #20	5 dead, 10 seriously injured, 71 with minor injuries, 391 buildings totally / partially destroyed (across Tokyo)	Disaster Relief Act was invoked.
September 10-11, 1980	Typhoon #13	1 dead, 1 with minor injuries (central and Tama regions)	
November 30, 1982	Rainstorm	1 dead, 1 with minor injuries (central and Tama regions)	
July 14, 1985	Rainstorm	1 dead, 1 with minor injuries (central Tokyo)	
March 23, 1986	Snow and rainstorm	2 dead, 1 seriously injured, 8 with minor injuries (across Tokyo and Oshima Island)	
July 25, 1987	Rainstorm	1 dead, 1 with minor injuries, etc. (across Tokyo)	
July 31, 1987	Rainstorm	1 dead, 2 with minor injuries (central Tokyo)	
August 27, 1989	Typhoon #17	1 dead (Ome, etc.)	
August 10, 1990	Typhoon #11	1 dead (across Tokyo)	
August 20, 1991	Rainstorm	3 dead, 1 missing, 2 with minor injuries, 6 buildings totally / partially destroyed (across Tokyo)	
September 19-20, 1991	Typhoon #18	1 dead, 1 seriously injured, 2 with minor injuries, 4 buildings totally / partially destroyed (across Tokyo)	
June 20, 1997	Typhoon #7	1 dead, 1 seriously injured, 2 with minor injuries (Shibuya, Musashi-Murayama, etc.)	
September 21-25, 1997	Typhoon #24	3 dead, 3 with minor injuries, 8 buildings totally / partially destroyed (Ogasawara)	
January 15, 1998	Snowstorm	1 dead, 2 with minor injuries (across Tokyo)	
July 21, 1999	Rainstorm	1 dead, 1 seriously injured, 2 with minor injuries (Shinjuku-ku, Suginami-ku, etc.)	
September 10, 2001	Typhoon #15	1 dead, 1 with minor injuries (across Tokyo)	
September 4-5, 2005	Rainstorm	2,972 floods above ground level, 2,644 floods below ground level	Disaster Relief Act was invoked.
September 11, 2006	Rainstorm	32 buildings flooded above ground level, 54 buildings flooded below ground level	
September 6-7, 2007	Typhoon #9	3 with minor injuries, 7 buildings partially destroyed, 166 buildings partially damaged, other damage	
July 8, 2008	Heavy rainfall in short time period	1 dead	
August 5, 2008	Heavy rainfall	5 dead, 86 buildings flooded below ground level other damaged	
August 28-30, 2008	Rainstorm	1 building totally destroyed, 4 buildings partially damaged	
August 9-10, 2009	Rainstorm	5 with minor injuries, 61 buildings flooded below ground level, other damage	
October 8, 2009	Typhoon #18	4 with minor injuries, 1 building totally destroyed, 20 buildings partially damaged	
July 5, 2010	Rainstorm	2 missing, 381 floods above ground level, 401 floods below ground level	
December 3, 2010	Rainstorm	1 dead, 1 injured, 14 floods above ground level, 14 floods below ground level	
August 26, 2011	Rainstorm	171 floods above ground level, 153 floods below ground level	
September 21, 2011	Typhoon #15	11 injured persons, 1 building completely collapsed, 1 building partially destroyed, 1 flood below ground level	
February 29, 2012	Snowstorm	1 seriously injured	
April 3, 2012	Rainstorm	5 with minor injuries, 14 buildings partially damaged	
June 19, 2012	Typhoon #4	4 with minor injuries, 9 buildings partially damaged	
September 30, 2012	Typhoon #17	1 with minor injuries, 7 buildings partially damaged	
October 15, 2013	Typhoon #26	37 persons killed, 3 persons missing (Oshima-cho, Machida-shi)	Disaster Relief Act was invoked.
February 8, 2014	Snow and rainstorm	5 seriously injured, 61 with minor injuries	
February 14, 2014	Snow and rainstorm	6 seriously injured, 50 with minor injuries	
September 8-11, 2015	Heavy rains in Kanto and Tohoku regions	1 with minor injuries, 8 floods above ground level, 14 floods below ground level	
August 21-22, 2016	Typhoon #9	2 with minor injuries, 55 floods above ground level, 89 floods below ground level	
September 20, 2016	Rainstorm	1 with minor injuries	
October 22, 2017	Typhoon #21	1 minor injury, 18 homes flooded above ground level, 23 homes flooded below ground level, 20 homes partially destroyed	
October 29, 2017	Typhoon #22	4 homes flooded above ground level, 7 homes flooded below ground level	
January 22-23, 2018	Snowstorm	592 people with minor injuries	
September 9, 2019	Typhoon No.15	1 dead, 7 slightly injured persons, 9 completely destroyed buildings, 98 half collapsed buildings, 1671 partially damaged buildings, 14 buildings suffering from inundation above a floor level, 9 buildings suffering from inundation below a floor level	Disaster Relief Act was invoked
October 12, 2019	Typhoon No.19	1 dead, 11 slightly injured persons, 23 completely destroyed buildings, 170 half collapsed buildings, 423 partially damaged buildings, 823 buildings suffering from inundation above a floor level, 635 buildings suffering from inundation below a floor level	Disaster Relief Act was invoked, Disaster Manegment Headquarters established

Major Past Disasters in Tokyo

Other disasters			
Date	Disaster name	Main damage	Remarks
January 11, 1965	Oshima Fires	358 buildings burnt down	Disaster Relief Act was invoked. Disaster Management Headquarters established
February 4, 1966	ANA jetliner crash	133 dead	
March 4, 1966	Canadian Pacific Airlines jetliner crash	63 dead, 1 missing, 8 seriously injured	
May 14, 1972	Landslide at Yanokuchi Nishi Mountain	2 buildings partially damaged	
April 7, 1977	Nippara rockfall incident	1 building partially damaged	
February 10, 1979	Gas explosion (Condominium complex in Minami Ikebukuro)	1 seriously injured, 23 with minor injuries, 9 buildings totally / partially destroyed	
November 2, 1981	Miyake Island Tornado	2 buildings partially damaged	
February 8, 1982	Hotel New Japan fire	32 dead, 150 injured	
February 9, 1982	JAL jetliner crash	24 dead, 150 injured	
October 10, 1982	Landslide	3 dead, 3 seriously injured	
October 3, 1983	Miyake Island volcanic eruption	340 buildings totally destroyed	Disaster Relief Act was invoked. Disaster Management Headquarters established
August 11, 1984	Landslide	1 building partially destroyed	
November 21, 1986	Izu Oshima Island volcanic eruption	6 buildings partially damaged	Disaster Relief Act was invoked. Disaster Management Headquarters established
May 26, 1987	TEPCO Oil Thermal Power Station fire	4 dead, 1 injured	
June 6, 1987	Special aged care facility Shojuen fire	17 dead, 25 injured	
April 24, 1989	Hachijo Island tornado	1 building partially destroyed, 17 buildings partially damaged	
August 24, 1989	Koto Ward high-rise condominium building fire	6 with minor injuries	
January 22, 1990	Road cave-in near the Okachimachi Station	10 with minor injuries	
May 26, 1990	Daiichi Kasei Kogyo explosion	8 dead, 18 injured	
June 16, 1990	Tanashi & Kodaira tornado	2 with minor injuries, 61 buildings partially damaged	
December 8, 1992	Gas explosion (Fuchu City)	2 seriously injured, 1 with minor injuries	
February 1, 1993	Gas explosion at a water piping installation site Etchujima (Koto Ward)	4 dead, 1 seriously injured	
September 27, 1994	Aogashima Village landslide	2 dead, 1 missing	
July 2, 1997	Diamond Grace crude oil spillage	18 with minor injuries	
June 27, 2000	Miyake Island volcanic eruption	1 with minor injuries, 16 buildings totally / partially destroyed	Disaster Relief Act was invoked. Disaster Management Headquarters established
September 1, 2001	Shinjuku Kabukicho building fire	44 dead, 3 injured	
August 14, 2006	Large-scale Tokyo area blackout	Power interrupted to 1.39 million households in Tokyo Metropolitan Area, mostly in Tokyo.	
June 19, 2007	Explosion at Shibuya hot spring facility	3 persons killed, 3 persons severely injured	
October 24, 2009	Daiichi Kofuku-maru maritime accident	1 dead, 4 missing	
April 27, 2014	Massive power failure in Tokyo	Power interrupted to approximately 300,000 households	
July 26, 2015	Plane crash of private small aircraft in Chofu-City	3 dead, 9 injured, 1 building burnt down, 1 building partially burnt down	
October 12, 2016	Large-scale power outage	Interruption of power supply to up to 350,000 households in Tokyo	

Facilities for Disaster Preparedness Education and Training

Ikebukuro Bosaikan (Tokyo Fire Department Ikebukuro Life Safety Learning Center)	Address 2-37-8 Nishiikebukuro, Toshima-ku Phone 03-3590-6565 Closed Tues., 3rd Wed. (or the following day, if either is a holiday), 12/28 through 1/4 Hours 9:00-17:00 Access 5 min. walk from South Exit, West Exit, and Metropolitan Exit, JR Ikebukuro Station URL http://www.tfd.metro.tokyo.jp/hp-ikbskan/
Tachikawa Bosaikan (Tokyo Fire Department Tachikawa Life Safety Learning Center)	Address 1156-1 Izumi-cho, Tachikawa-shi Phone 042-521-1119 Closed Thurs., 3rd Fri. (or the following weekday, if either is a holiday), 12/28 through 1/4 Hours 9:00-17:00 Access Tachikawa Shobosho Fire Station stop (bus departing from North Exit, JR Tachikawa Station) URL http://www.tfd.metro.tokyo.jp/hp-ttbskan/index.html
Honjo Bosaikan (Tokyo Fire Department Honjo Life Safety Learning Center)	Address 4-6-6 Yokokawa, Sumida-ku Phone 03-3621-0119 Closed Wed., 3rd Thurs. (or the following day, if either is a holiday), 12/28 through 1/4 Hours 9:00-17:00 Access 10 min. walk from North Exit of Kinshicho Station on the JR Sobu Line, or Exit 4 of Kinshicho Station on the Hanzomon Line URL http://www.tfd.metro.tokyo.jp/hp-hjbskan/index.html
Tokyo Restoration Memorial Museum/ Tokyo Memorial Temple	Address 2-3-25 Yokoami, Sumida-ku (in Yokoamicho Park) Phone 03-3622-1208 Closed Mon. (or Tues., if Mon. is a holiday), 12/28 through 1/4 Hours 9:00-17:00 Access 10 min. walk from JR Ryogoku Station (JR Sobu Line) West Exit or 2 min. walk from Ryogoku Station (Toei Oedo Line) A1 Exit URL http://tokyoireikyokai.or.jp/
Fire Prevention Museum	Address 3-10 Yotsuya, Shinjuku-ku Phone 03-3353-9119 Closed Mon. (or Tues., if Mon. is a holiday), year-end and New year (12/28 through 1/4) Hours 9:30-17:00 Access Directly connected to Yotsuya 3-chome Station (Tokyo Metro Marunouchi Line), Exit No. 2 URL http://www.tfd.metro.tokyo.jp/ts/museum.html
SONA AREA TOKYO (Tokyo Rinkai Disaster Prevention Park)	Address 3-8-35 Ariake, Koto-ku Phone 03-3529-2180 Closed Mon. (Open on Mon. if it is a national holiday, and then closed the following day.), New Year holidays, irregular closing days. (Please check the following website for details.) Hours 9:30-17:00 Access 4 min. walk from Kokusai-tenjiyo Station (Rinkai Line), 2 min. walk from the Yurikamome Ariake Station URL http://www.tokyorinkai-koen.jp/sonaarea/
Public Interest Incorporated Association Zenkoku Shiyu Bukken Saigai Kyosaikai Bosai Semon Library	Address 2-4-1 Hirakawa-cho, Chiyoda-ku (8F, Nihon Toshi Center Hall) Phone 03-5216-8716 Closed Sat., Sun., holidays, year-end and New year, and library sorting days Hours 9:00-17:00 Access 4 min. walk from Nagatacho Station on the Yurakucho Line, Hanzomon line or Namboku Line URL http://www.city-net.or.jp/library/

Sections in Charge of Disaster Response for Municipal Authorities

Municipality	Section in Charge Of Disaster Prevention	Phone (main)	Municipality	Section in Charge Of Disaster Prevention	Phone (main)
Chiyoda-ku	Disaster Response and Crisis Management Section, Policy Management Division	03-3264-2111	Machida-shi	Disaster Prevention Section, Disaster Prevention Safety Department	042-722-3111
Chuo-ku	Disaster Prevention Section, General Affairs Department	03-3543-0211	Koganei-shi	Community Safety Section, General Affairs Division	042-383-1111
Minato-ku	Disaster Prevention Section, Disaster Prevention & Living Safety Support Division	03-3578-2111	Kodaira-shi	Disaster Prevention and Crisis Management Section, General Affairs Department	042-341-1211
Shinjuku-ku	Crisis Management Section, General Affairs Department	03-3209-1111	Hino-shi	Disaster Safety Section, General Affairs Division	042-585-1111
Bunkyo-ku	Disaster Management Section, General Affairs Department	03-3812-7111	Higashi Murayama-shi	Disaster Prevention & Safety Section, Environment and Safety Division	042-393-5111
Taito-ku	Crisis & Disaster Countermeasures Section, Crisis Management Room	03-5246-1111	Kokubunji-shi	Living Safety Section, General Affairs Division	042-325-0111
Sumida-ku	Disaster Prevention Section in Charge of Crisis Management, City Planning Department	03-5608-1111	Kunitachi-shi	Community Disaster Prevention Section, Administrative Management Division	042-576-2111
Koto-ku	Disaster Prevention Section, Crisis Management Room, General Affairs Division	03-3647-9111	Fussa-shi	Safe Town Planning Section, General Affairs Division	042-551-1511
Shinagawa-ku	Disaster Prevention Section, Disaster Prevention and City Planning Department	03-3777-1111	Komae-shi	Safety & Security Section, General Affairs Division	03-3430-1111
Meguro-ku	Disaster Prevention Section, Crisis Management Room	03-3715-1111	Higashiyamato-shi	General Affairs Section, General Affairs Division	042-563-2111
Ota-ku	Disaster Prevention and Crisis Management Section, General Affairs Department	03-5744-1111	Kiyose-shi	Disaster Prevention and Crime Prevention Section, General Affairs Division	042-492-5111
Setagaya-ku	Disaster Countermeasures Section, Crisis Management Room	03-5432-1111	Higashi kurume-shi	Disaster Prevention and Safety Section, Environmental Safety Department	042-470-7777
Shibuya-ku	Disaster Prevention Section, Crisis Management Measures Department	03-3463-1211	Musashi murayama-shi	Disaster Prevention & Safety Section, General Affairs Division	042-565-1111
Nakano-ku	Crisis Management Section General Affairs Department	03-3389-1111	Tama-shi	Disaster Prevention Section, General Affairs Division	042-375-8111
Suginami-ku	Disaster Prevention Section, Crisis Management Room	03-3312-2111	Inagi-shi	Disaster Prevention Section, Fire Defense Headquarters	042-377-7119
Toshima-ku	Disaster Preparedness and Crisis Management Section, General Affairs Department	03-3981-1111	Hamura-shi	Disaster Prevention & Security Section, Resident Life Division	042-555-1111
Kita-ku	Disaster Prevention Section, Crisis Management Room	03-3908-1111	Akiruno-shi	Community Development Section, General Affairs Division	042-558-1111
Arakawa-ku	Disaster Prevention Section, Resident Life Division	03-3802-3111	Nishitokyo-shi	Crisis Management Section General Affairs Department	042-464-1311
Itabashi-ku	Disaster Prevention Section, Crisis Management Room	03-3964-1111	Mizuho-machi	Regional Promotion Section, Resident Living Division	042-557-0501
Nerima-ku	Resident Disaster Prevention Section, Crisis Management Office	03-3993-1111	Hinode-machi	Living Safety & Security Section	042-597-0511
Adachi-ku	Disaster Countermeasures Section, Crisis Management Department	03-3880-5111	Hinohara-mura	General Affairs Section	042-598-1011
Katsushika-ku	Crisis Management Section, Regional Development Department	03-3695-1111	Okutama-machi	General Affairs Section	0428-83-2111
Edogawa-ku	Disaster Prevention and Crisis Management Section, Crisis Management Room	03-3652-1151	Oshima-machi	Disaster Prevention Section,	04992-2-0035
Hachioji-shi	Disaster Prevention Section, Living Safety Division	042-626-3111	Toshima-mura	General Affairs Section	04992-9-0011
Tachikawa-shi	Disaster Prevention Section, Resident Life Division	042-523-2111	Niiijima-mura	General Affairs Section	04992-5-0240
Musashino-shi	Disaster Prevention Section, Disaster Prevention & Safety Division	0422-51-5131	Kozushima-mura	General Affairs Section	04992-8-0011
Mitaka-shi	Disaster Prevention Section, General Affairs Division	0422-45-1151	Miyake-mura	General Affairs Section	04994-5-0981
Ome-shi	Disaster Preparedness Section, Civic Affairs Department	0428-22-1111	Mikurajima-mura	General Affairs Section	04994-8-2121
Fuchu-shi	Disaster Prevention Section, Administrative Management Division	042-364-4111	Hachijo-machi	General Affairs Section	04996-2-1121
Akishima-shi	Disaster Prevention Section, General Affairs Division	042-544-5111	Aogashima-mura	General Affairs Section	04996-9-0111
Chofu-shi	General Disaster Prevention & Safety Section, General Affairs Division	042-481-7111	Ogasawara-mura	General Affairs Section	04998-2-3111

Inquiries Relating to Disaster Preparedness

If you have any questions about disaster prevention, please contact your local municipal authority's disaster prevention section (see page 63). TMG and other relevant organizations also accept inquiries on areas of their respective expertise, (generally 9 am to 5 pm, Mon. through Fri.)

Item	Department in charge	Tel. No.
On disaster prevention measures in general	Management Section, Disaster Prevention Division, Bureau of General Affairs	03-5388-2453
On district-based vulnerability measures for the areas crowded with wooden houses	Disaster Management Section, Urban Department Projects Division, Bureau of Urban Development	03-5320-5003
About earthquake resistance (Housing and emergency transport roadside building) (Condominiums)	Building Planning Section, Urban Building Division Bureau of Urban Development Office for Housing Policy Condominium Policy Section, Bureau of Urban Development	03-5388-3362 03-5320-5004
Flood damage related to rivers	Disaster Prevention Section, River Division, Bureau of Construction	03-5320-5164
Medical aid	Emergency Medical Services and Disaster Response Section, Medical Policy Division, Bureau of Social Welfare and Public Health	03-5320-4445

Electricity	Please contact your contracted service provider.	
City gas		
Telephone		
Waterworks	Bureau of Waterworks Customer Service Center (23 Wards)	03-5326-1101
	Bureau of Waterworks Tama Customer Service Center * For Musashino, Akishima, Hamura, Hinohara and minor islands, please contact each municipality directly.	0570-091-101
Sewerage	General Affairs Division, Bureau of Sewerage, Tokyo Metropolitan * For the Tama area, please contact each municipality directly.	03-5320-6511
Police	Disaster Division, Security Bureau, Metropolitan Police Department	03-3581-4321 ext. 55511
Firefighting	Voices of Residents, PR Section, Planning and Coordination Division, Tokyo Fire Department * For Inagi and minor islands, please contact each municipal fire department directly.	03-3212-2111 ext. 2326

Emergency laws, support groups, rescue operations, etc	Japan Red Cross Tokyo Branch	03-5273-6741 (rep)
Volunteer activities	Tokyo Volunteer Action Center	03-3235-1171 (rep)

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