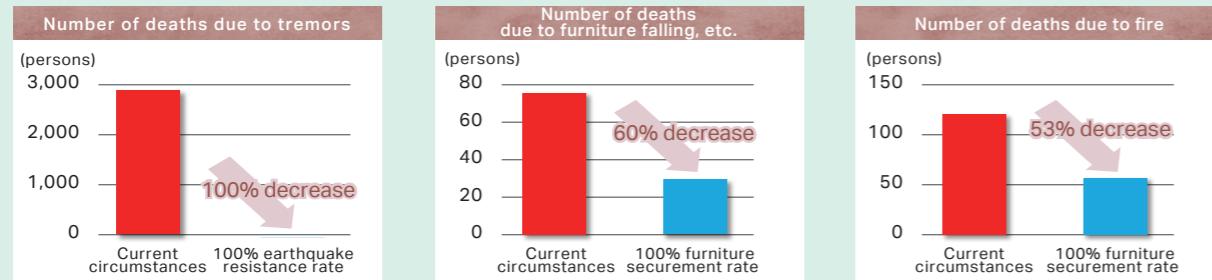


Prevent damage by preparing in advance!

Disaster prevention measures and their benefits

If older buildings that are vulnerable to shaking are made more earthquake resistant, furniture is secured, and improvements in initial fire extinguishing are made, the number of buildings totally destroyed and the amount of people who lose their life during earthquakes can be significantly reduced.

Simulating a Nankai Trough Megathrust Earthquake



*The Ministry of Land, Infrastructure, Transport and Tourism stipulates those buildings meeting the new earthquake resistance standard (the standard for building construction after 1981) are not likely to collapse or fall even in the event of a major earthquake of JMA Seismic Intensity Scale 6 Upper to 7. Therefore, it can be assumed that buildings meeting this new earthquake resistance standard will not be destroyed, and even if they are damaged, there will still be enough time for residents to escape and avoid fatalities.

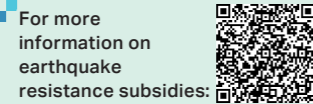
*Initial fire extinguishing refers to the extinguishing of a fire using water, fire extinguishers, or other such means by occupants, neighbors, or other people when a fire is in its early stages.

Disaster preparedness measures you can take at home

Damage caused by earthquakes can be reduced by taking disaster preparedness measures before the inevitable occurs. Disaster preparedness measures range from those taken by individual residents to those taken by the government. Here are some examples of disaster preparedness measures you can take at home. Prevent damage by taking precautionary measures!

Consider earthquake-proofing your home!

- Point!** Homes built before the earthquake resistance standard significantly changed in May 1981 are at risk of collapse due to earthquakes. First, check when your home was built.
- Wooden houses constructed before May 1981 are eligible for a free seismic assessment conducted by the municipal government. Confirm the earthquake resistance of your home with a seismic assessment today.
- There is a subsidy system for the seismic retrofitting of wooden houses that have been deemed as being at risk of collapsing due to earthquakes following a seismic assessment. For details, please contact your local municipal office.



Prepare supplies!

- Point!** Prepare emergency supplies so that you can evacuate immediately.
- In the event of an earthquake, there may be power outages and water stoppages. Prepare food, drinking water, portable toilets, and other necessities.
- Prepare a backup power source for your smartphone and a radio so that you have a way to access information.



Discuss with your family what to do if there is an earthquake!

- Point!** Decide on a safe place in the house where you can all escape to.
- Decide on a means of communication and a meeting place.
- Check the routes from your home, school, or workplace to the nearest evacuation center.



Help your neighbors and others around you!

- Point!** Participate in local disaster drills and seminars.
- Learn various disaster preparedness skills at the Yamanashi Prefectural Disaster Prevention and Safety Center (Chuo City Phone: 055-273-1048).



For questions regarding damage projections, please contact:

Disaster Prevention and Crisis Management Division,
Yamanashi Prefecture Disaster Prevention Bureau
Phone: 055-223-1432 Email: bosai@pref.yamanashi.lg.jp



Earthquake proof your furniture!

- Point!** Secure large pieces of furniture to prevent them from moving and trapping you in the event of an earthquake.
- Take measures to prevent shattering of glass.
- Keep flammable objects away from the stove or gas cooker!



Check the hazard map!

- Point!** How strong is the expected shaking in your area?
- Is there any risk of landslides or liquefaction due to earthquakes?



Earthquake Damage Assessment Survey



Yamanashi Prefecture Tourism Mascot, Takeda Hishimaru

Official Results

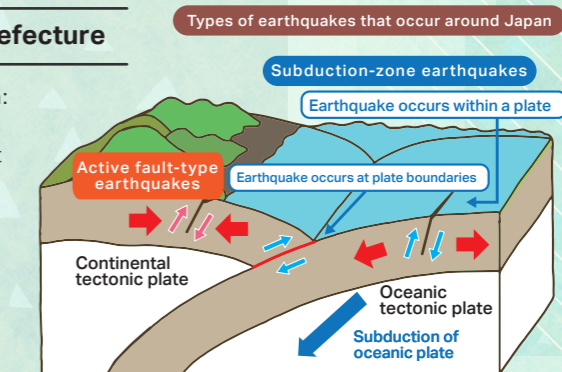
Introduction

Japan is known as one of the most earthquake-prone countries in the world. Since the devastating 2011 Great East Japan Earthquake, which left many people dead or missing, subsequent major earthquakes have continued to cause damage in various parts of the country.

In response to this, Yamanashi Prefecture has conducted a new earthquake damage assessment survey for the first time in approximately 25 years. The survey used the latest scientific findings and methodologies to identify possible issues and highlight important lessons to be learned from past earthquakes. This pamphlet is intended to inform the citizens of Yamanashi Prefecture about what kind of earthquake may occur in the vicinity, how much damage will be caused, and what you should do to prepare for an earthquake. Please make use of the disaster preparedness measures highlighted in this pamphlet to protect yourself from earthquakes.

Earthquakes in Yamanashi Prefecture

Two types of earthquakes occur in Japan: **active fault-type earthquakes**, which are caused by seismic activity on active fault lines (e.g., the 1995 Great Hanshin-Awaji Earthquake), and **subduction-zone earthquakes**, which occur at the boundaries between oceanic tectonic plates and continental tectonic plates (e.g., the 2011 Great East Japan Earthquake).



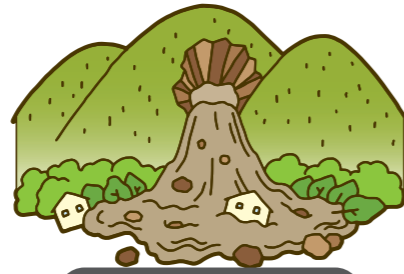
Reference: Headquarters for Earthquake Research Promotion Homepage

Yamanashi Prefecture

What happens during an earthquake



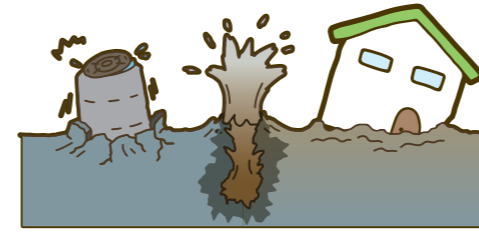
Collapse of buildings



Landslide disasters



Damage to infrastructure



Ground liquefaction



Fires



Isolation of villages

Major potential earthquakes and damage

Overview of damage

Citing the latest scientific findings, the Yamanashi Prefectural Government has made predictions of how much damage buildings, people, infrastructure, etc. would suffer due to a major earthquake in the prefecture.

An earthquake in the Sone-kyuryo Fault Zone, located in the center of Yamanashi Prefecture, is predicted to cause the most damage, with potentially more than 90,000 buildings being **completely destroyed**, approximately 40,000 fatalities, and 20,000 others injured.

Characteristics of each earthquake

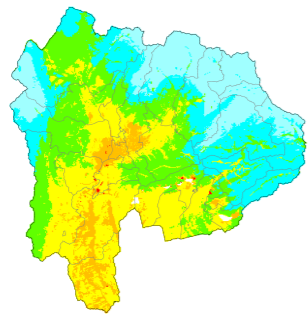
Type of damage (excerpt)	Unit	Nankai Trough Megathrust Earthquake	Magnitude 7 earthquake directly under the Tokyo Metropolitan Area (Tachikawa City)	South-central section of the Itoigawa-Shizuoka tectonic Fault Zone	South-central section of the Itoigawa-Shizuoka Tectonic Fault Zone	Sone-kyuryo Fault Zone	Minobu Fault	Shiozawa Fault	Ougiyama Fault	Fujikawa-kako Fault Zone	(For reference) Magnitude 8 earthquake directly under the Tokyo Metropolitan Area (Sagami Trough) Tectonic Fault Zone		
		Subduction-zone earthquake	Subduction-zone earthquake	Active fault -type earthquake	Active fault -type earthquake	Active fault -type earthquake	Active fault -type earthquake	Active fault -type earthquake	Active fault -type earthquake	Active fault -type earthquake	Active fault -type earthquake	Subduction-zone earthquake	
Building damage (total collapse)	Liquefaction	Bldg.	1,351	770	455	1,051	1,198	282	285	336	901	1,132	
	Shaking	Bldg.	52,542	3,235	18,490	66,746	79,643	176	2,100	1,808	21,263	13,659	
	Landslide disaster	Bldg.	122	65	16	67	93	30	32	61	75	134	
	Fire	Bldg.	6,002	229	580	4,897	13,169	-	163	22	2,235	12,160	
	Total	Bldg.	60,017	4,299	19,542	72,761	94,102	488	2,580	2,227	24,474	27,085	
Casualties	Fatalities	Persons	3,019	202	1,088	3,491	3,843	14	104	114	1,219	1,044	
	Injuries	Persons	16,254	1,612	6,847	18,283	20,008	136	826	881	7,899	4,613	
Infrastructure damage	Water supply	Population without water supply	Persons	391,676	41,803	52,117	253,969	415,126	9,435	47,756	49,896	95,752	121,289
	Sewage	Population affected	Persons	58,314	20,472	14,672	28,013	48,696	4,612	27,614	25,810	24,583	77,238
	Electricity	Population without power	Lines	623,786	198,684	189,454	442,793	593,101	53,483	119,136	134,150	298,449	183,818
	Telecoms	Disrupted lines	Cases	599,068	192,889	187,869	422,302	555,669	53,509	118,281	131,599	286,515	193,297
	City gas	Number of outages	Cases	24,023	-	-	15,184	24,023	-	-	-	-	15,184
	LP gas	Number of damaged gas lines	Persons	920	131	187	438	723	31	307	294	143	889
Evacuees			140,329	9,738	32,373	140,635	207,242	1,673	10,814	9,960	48,839	53,443	

*Damage may vary depending on season and time *Total values may not add up due to handling of decimal points



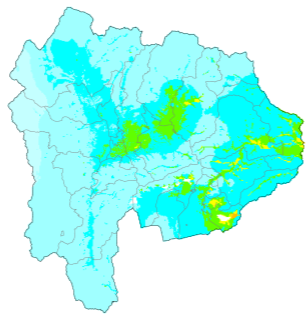
Nankai Trough Megathrust Earthquake

A subduction-zone earthquake that is predicted to cause extensive damage across a wide area from Shizuoka Prefecture to Kyushu. Although the epicenter is far away, central to southern parts of Yamanashi Prefecture will be hit by an earthquake with a maximum intensity of 7 on the JMA Seismic Intensity Scale. As a result, more than 60,000 buildings will be completely destroyed and approximately 300 people will lose their lives.



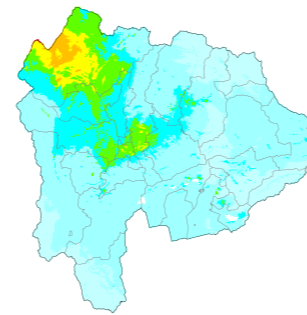
Magnitude 7 earthquake directly under the Tokyo Metropolitan Area (Tachikawa City)

A subduction-zone earthquake that is predicted to occur in Tokyo, Kanagawa and Chiba prefectures. The eastern part of the prefecture, which is relatively close to the epicenter, will experience tremors with a maximum intensity of 6 Upper on the JMA Seismic Intensity Scale. As a result, about 4,000 buildings will be totally destroyed and about 200 people will be killed.



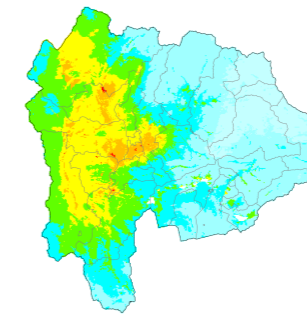
South-central section of the Itoigawa-Shizuoka Tectonic Fault Zone

An active fault-type earthquake that may occur along the fault zone from northwestern Yamanashi Prefecture to Nagano Prefecture. The epicenter is predicted to be located in the northwestern part of Yamanashi Prefecture, where tremors with a maximum intensity of 7 on the JMA Seismic Intensity Scale may occur. As a result, about 20,000 buildings will be completely destroyed and about 1,000 people will lose their lives.



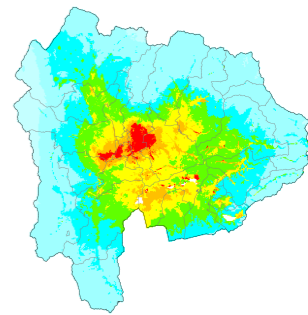
Southern section of the Itoigawa-Shizuoka Tectonic Fault Zone

An active fault-type earthquake that may occur along the fault zone from northwestern Yamanashi Prefecture to Nagano Prefecture. The epicenter is predicted to be located in the northwestern part of Yamanashi Prefecture, where tremors with a maximum intensity of 7 on the JMA Seismic Intensity Scale may occur. As a result, about 20,000 buildings will be completely destroyed and about 1,000 people will lose their lives.



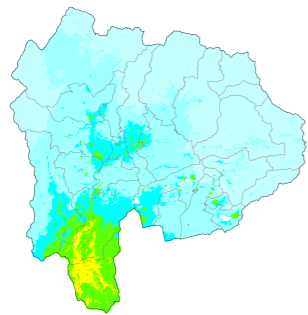
Sone-kyuryo Fault Zone

A Sone-kyuryo earthquake is predicted to cause the most extensive damage in Yamanashi Prefecture according to damage estimates. Tremors, with an intensity of 7 on the JMA Seismic Intensity Scale 7, will be widely felt in the central part of the prefecture, where the epicenter is predicted to be located. As a result, more than 90,000 buildings will be totally destroyed and about 4,000 people will lose their lives.



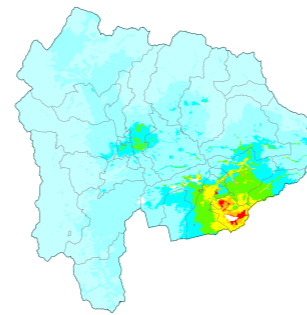
Minobu Fault

An active fault-type earthquake predicted to occur in south-west Yamanashi Prefecture. Tremors will reach a maximum intensity of 6 Upper on the JMA Seismic Intensity Scale, with an epicenter located in the south-west part of the prefecture. As a result, approximately 500 buildings will be completely destroyed and about 100 people will be killed.



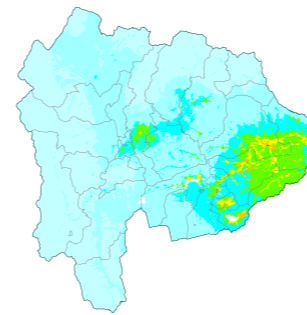
Shiozawa Fault

An active fault-type earthquake that is predicted to occur from south-east Yamanashi Prefecture to Kanagawa and Shizuoka prefectures. In the south-east part of the prefecture where the epicenter is due to be located, tremors with a maximum intensity of 7 on the JMA Seismic Intensity Scale will occur. As a result, about 3,000 buildings will be totally destroyed and approximately 100 people will lose their lives.



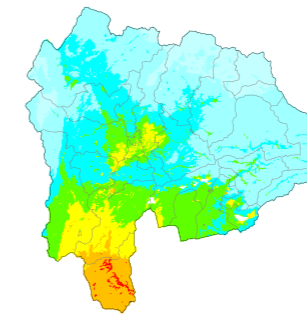
Ougiyama Fault

An active fault-type earthquake that is predicted to occur from eastern Yamanashi Prefecture to Kanagawa Prefecture. The epicenter is predicted to be located in the eastern part of the prefecture, where tremors with a maximum intensity of 7 on the JMA Seismic Intensity Scale may occur. As a result, approximately 2,000 buildings will be completely destroyed and about 100 people will be killed.



Fujikawa-Kako Fault Zone

An earthquake due to occur from southern Yamanashi Prefecture to Shizuoka Prefecture. In the southern part of the prefecture near the epicenter, tremors with a maximum intensity of 7 on the JMA Seismic Intensity Scale may occur. As a result, more than 20,000 buildings will be completely totally and approximately 1,000 people will lose their lives.



(For reference) M8 earthquake directly under the Tokyo Metropolitan Area (Sagami Trough)

A subduction-zone earthquake that may cause extensive damage across a wide area centered on the Tokyo Metropolitan Area. The earthquake will cause tremors with a maximum intensity of 7 on the JMA Seismic Intensity Scale, mainly in the eastern part of the prefecture, which is close to the predicted epicenter. As a result, approximately 30,000 buildings will be completely destroyed and about 1,000 people will be killed.

