

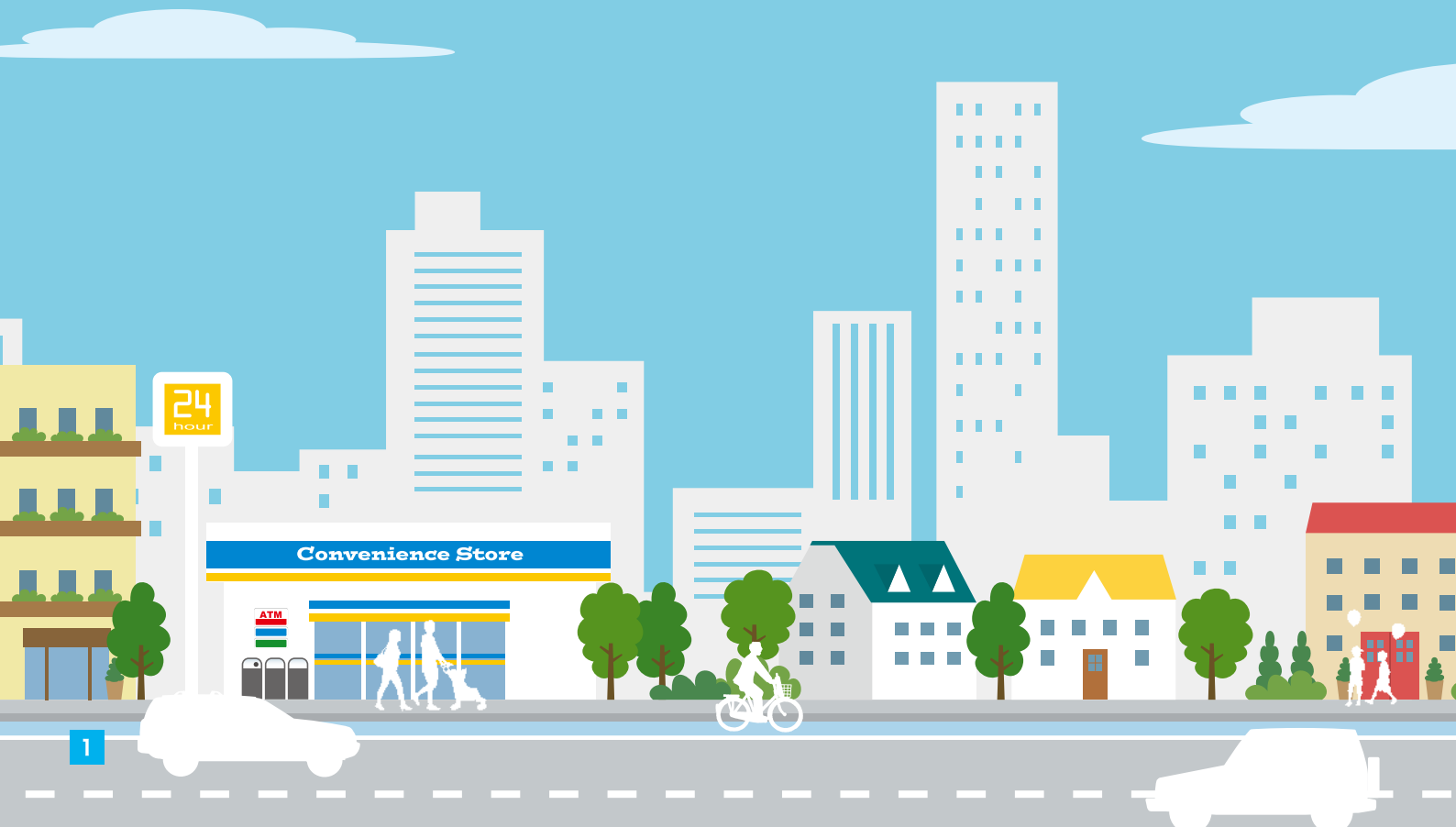


Saitama City  
Disaster Prevention **“and”** Urban Development Plan 2016

Overview

# What is the Saitama City Disaster Prevention “and” Urban Development Plan?

The Saitama City Disaster Prevention Urban Development Plan not only implements disaster prevention for safety and peace of mind but also proceeds with the aim to include disaster prevention in comprehensive urban development in order to continue providing a safe, habitable city with convenience and comfort.



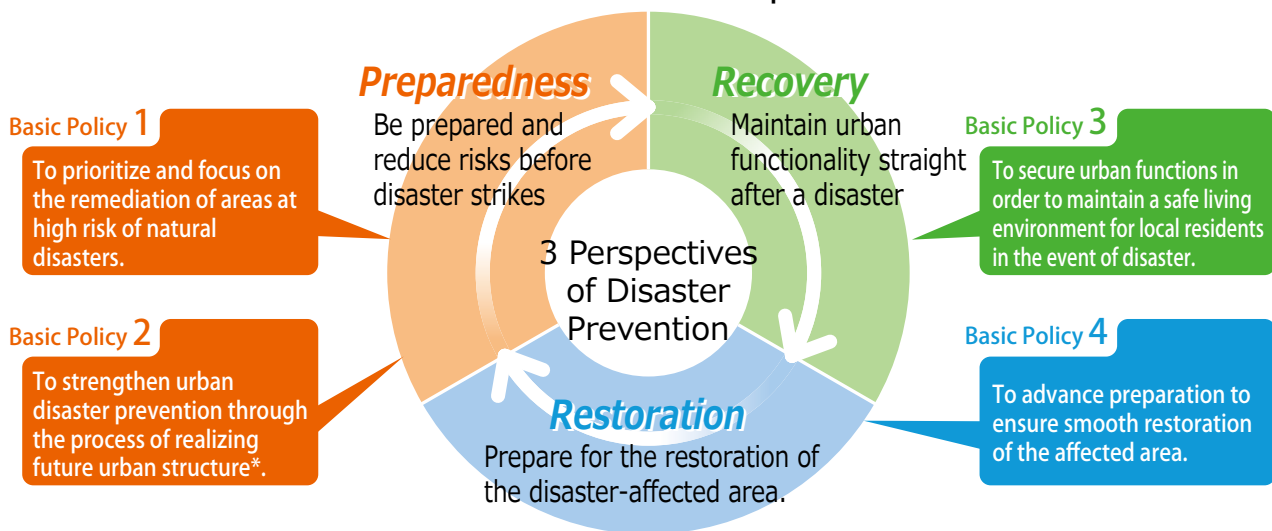
## The Purpose of Establishing the Disaster Prevention Urban Development Plan

The Disaster Prevention Urban Development Plan is a plan established to spell out the basic policies and concrete measures addressing urgent issues of disaster prevention concerning the development of an environment that is disaster-resistant, and supports evacuation and emergency operations in times of disaster.

While citizens, businesses, and municipal government of Saitama City work together to build a safe and livable city, the Saitama City Disaster Prevention Urban Development Plan is established for the purpose of developing a city that is better prepared to handle emergencies and ensuring rapid recovery and allow for smooth restoration when a disaster strikes.

## Perspective Planning and Basic Policy

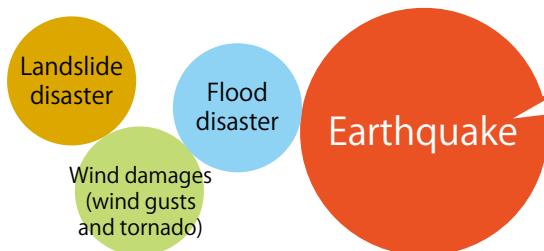
Up until now, disaster prevention measures have been planned with a focus on before the occurrence of earthquake disasters, however based on past experiences of great earthquakes in recent years it is important to practice measures for rapid recovery and restoration at normal times on the assumption that disaster has struck. For this reason, four basic policies are developed based on three perspectives in the establishment of the Disaster Prevention Urban Development Plan.



## The Need to Focus on Disaster Risk Reduction

Saitama City's disaster prevention urban development pursues urban development with a focus on measures to be taken when earthquake disaster occurs, and to reduce the risk of large-scale fire caused by the earthquake from spreading.

■ Anticipated Disaster Risks in Saitama City



- The probability of earthquake occurring directly below the capital of Japan is increasing.
- Large-scale damages are expected when fire is involved in the case of natural disaster occurs.

**It is essential to prevent the spread of large-scale fire and be able to escape to emergency evacuation sites at the time of earthquake.**

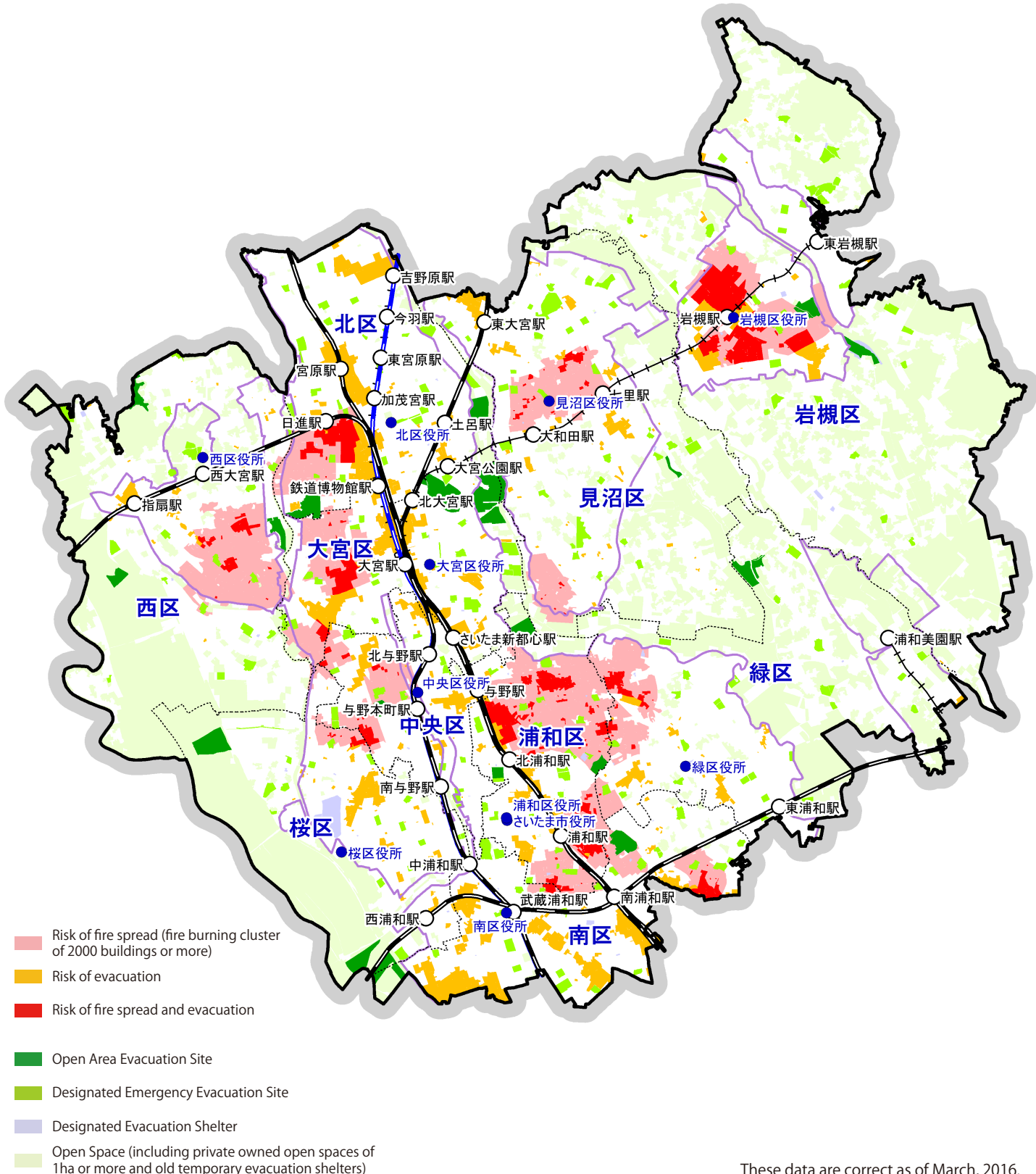


**The Disaster Prevention Urban Development Plan focuses on addressing disaster risks.**

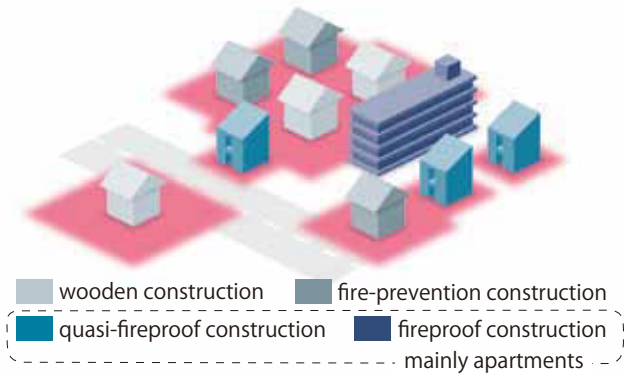
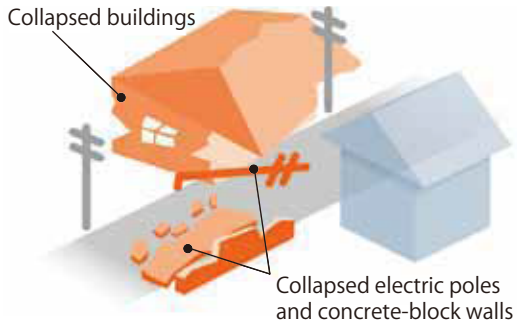
# Disaster Risk Assessment

## Fire Spread and Evacuation Risk Assessment

Risk of fire spreading widely and evacuation risk such as potential obstacles from collapsed buildings blocking the evacuation route are analyzed in earthquake and fire situations. The findings identify risk situations and areas in Saitama City that are either at risk of fire spread, evacuation, or both overlapping.



These data are correct as of March, 2016.



### What is evacuation risk?

On the assumption of that all the buildings constructed based on the old seismic code (before the year 1981) collapsed in the event of a large-scale earthquake, road blockage of evacuation routes or lack of evacuation sites and open areas within 500m of evacuees may lead ineffective evacuation.

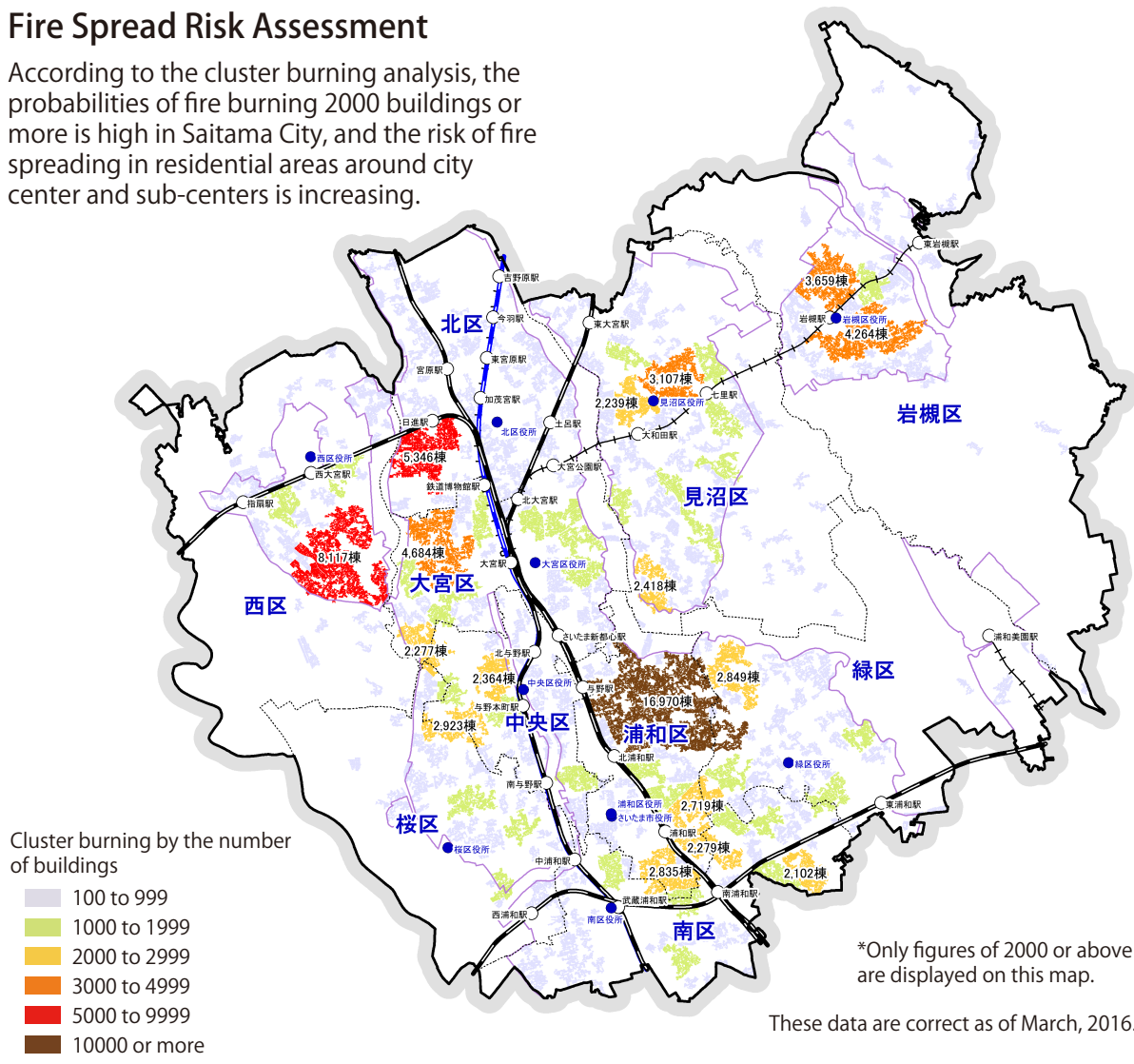


### What is cluster burning risk?

On the assumption of that firefighting is unable to carry out effectively in the event of fire caused by a large-scale earthquake, depending on the type and size of buildings, and the density of built-up area, fire may spread to a certain point or wipe out the area entirely.

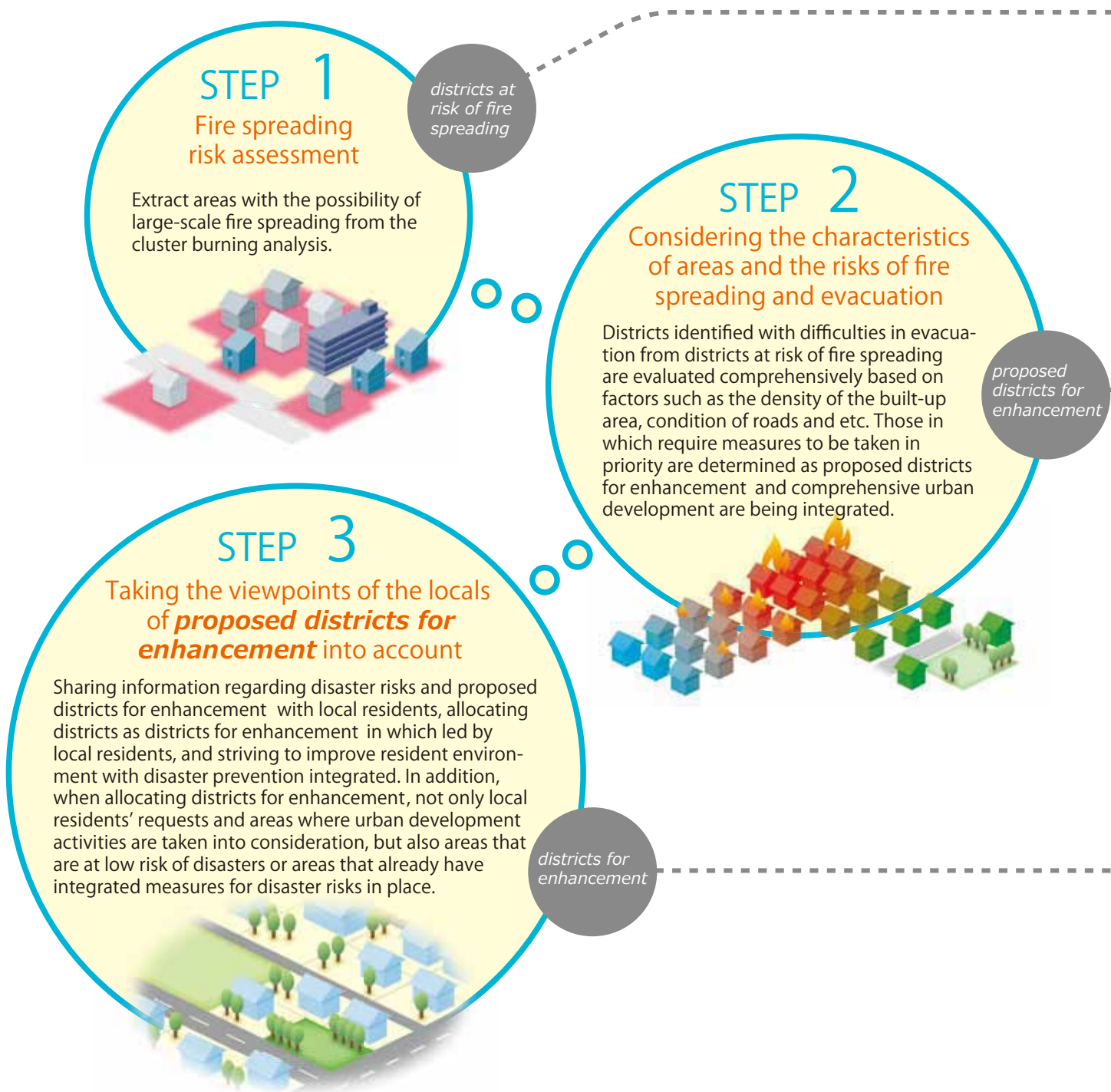
## Fire Spread Risk Assessment

According to the cluster burning analysis, the probabilities of fire burning 2000 buildings or more is high in Saitama City, and the risk of fire spreading in residential areas around city center and sub-centers is increasing.



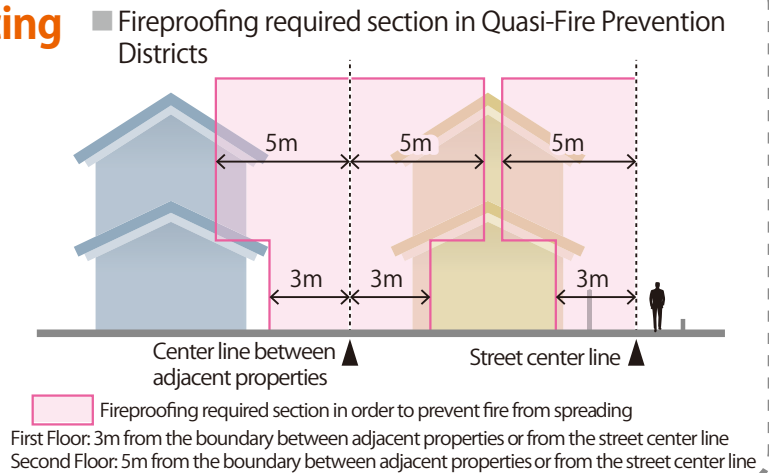
### **Policy 1** To prioritize and focus on the remediation of areas that are at high risk of natural disasters

In areas that are at high risk of natural disasters, the municipal government and residents cooperate together in order to protect the lives and assets of the people. In order to implement effective measures geared to target areas at risk and their characteristics, a staged approach is being implemented based on the following three steps:



## Improvements of districts facing high risk of fire spreading

Districts (districts at risk of fire spreading), required to take countermeasures against fire spreading as identified in the results of the fire spreading risk assessment, will be boosted with fire-resistant constructions as indicated in the Fire Prevention Districts and Quasi-Fire Prevention Districts\* suppressing fire spreads and enhancing fire spread resistance in urban areas.



## Improvements of districts facing fire spreading and evacuation risks

Identify areas facing evacuation difficulties in districts that are at high risk of fire spreading and taking their characteristics into consideration when allocating proposed districts for enhancement. Furthermore, districts for enhancement are allocated from proposed districts for enhancement by taking into account the residents' viewpoints and proceed improvements in these districts.

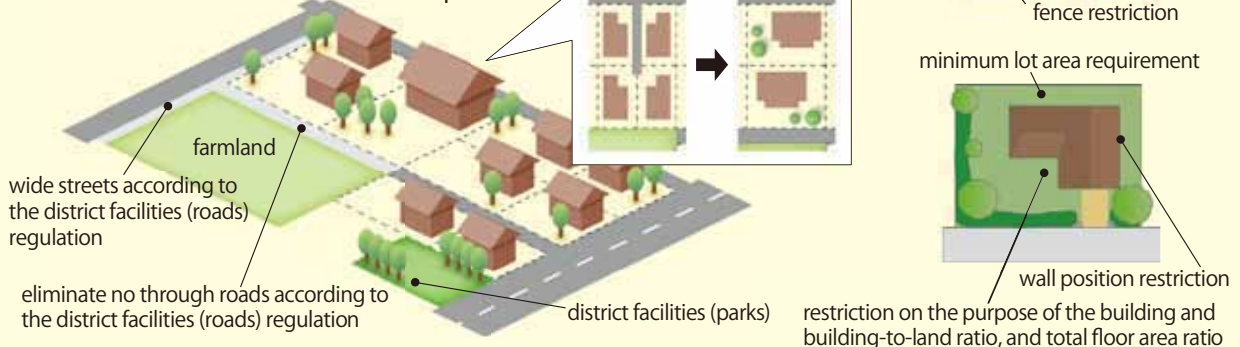
### Promotion of individual measures

- 1) Make use of subsidies for earthquake-resistant improvements in building structures.
- 2) Facilitate road widening projects aimed at narrow roads\* for road improvements.
- 3) Secure and preserve open spaces.
- 4) Enhance water sources for firefighting\*, emergency provisions, and materials and equipment for emergencies; and strengthen disaster prevention activities by voluntary organizations.

### Introduction of the District Plan\*

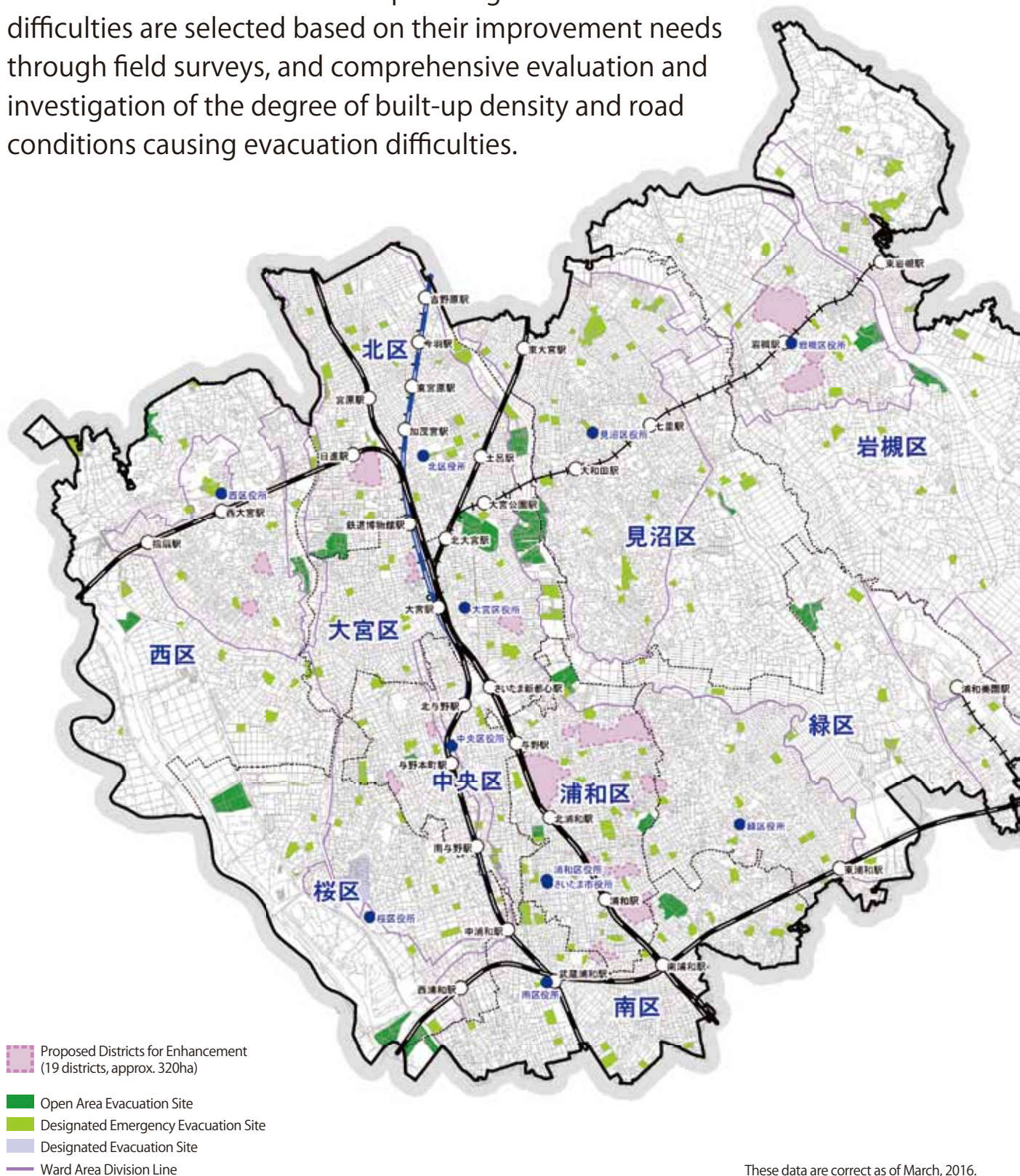
- 1) Set minimum lot area requirement in order to preserve a low density, favorable resident environment.
- 2) Determine district facilities (roads, parks, etc.) in order to secure a certain number of urban infrastructures.
- 3) Set a setback distance between the structure building's wall and streets and adjacent properties.\*
- 4) Restrict fences to hedges.

■ Diagram: Improvements in resident environment in accordance to the district plan.



## Allocation of Proposed Districts for Enhancement and Their Characteristic Trends

Districts that are at risks of fire spreading and evacuation difficulties are selected based on their improvement needs through field surveys, and comprehensive evaluation and investigation of the degree of built-up density and road conditions causing evacuation difficulties.



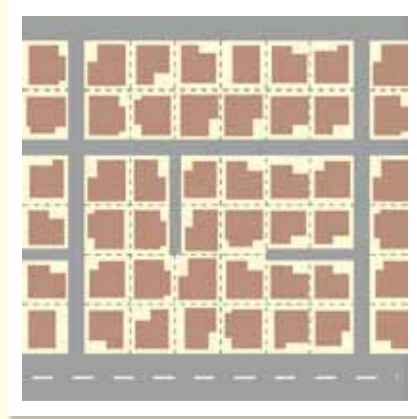
These data are correct as of March, 2016.



## High density built-up areas with fewer open spaces

- Nearly all neighborhood road constructions are complete, however many are narrow.
- Fewer open spaces are available for evacuation use.
- High density, built-up areas and increasing trend in three-story residential houses due to small lot sizes.

**Lot areas are subdivided while no through roads and more building structures are built.**



## Subdivision of spacious housing lot areas are increasing

- Nearly all neighborhood road constructions complete, however the number of no through roads and small narrow housing lot areas are on the rise.
- High-density constructions are progressing due to subdivided lot areas.
- Distribution of parking lots and farmlands that may possibly be used for housing lands.

**Narrow housing lands are gradually increasing due to subdivision of lot areas and housing on farmlands.**



## Housing land areas are gradually increasing in undeveloped infrastructure areas

- Parts of the area are housing lands while neighborhood roads are either undeveloped or irregularly developed and streets are built disorderly.
- In addition to subdivision of lot areas, high-density constructions are progressing at a high building-to-land ratio.
- Distribution of parking lots and farmlands that may possibly be used for housing lands.

**While small housing development are being carried out in undeveloped infrastructure areas, narrow housing lands are gradually increasing due to subdivision of lot areas and farmlands.**



## Specific Policies of Disaster Prevention Urban Development

### Policy 2

## Policy to strengthen urban disaster prevention through the process of future urban structure realization

Induced land use in accordance to future urban structures leads to improvements in urban disaster prevention. This policy plays an important role in strengthening the bases and networks of the entire city.



### Creating a safe, high-density urban area

- 1) Promote urban development of city center and sub-centers with high priority
- 2) Maintain fireproof urban areas and fundamental facilities such as roads and open spaces

### Take disaster risks into account in the development of land use and urban facilities

- 1) Prevent unrestricted development in areas at high risk of inundation and soil liquefaction
- 2) Maintain evacuation sites, firebreak belts and escape routes with high priority

### Policy 3

## Policy to secure urban functions in order to maintain a safe living environment for residents in the event of disaster

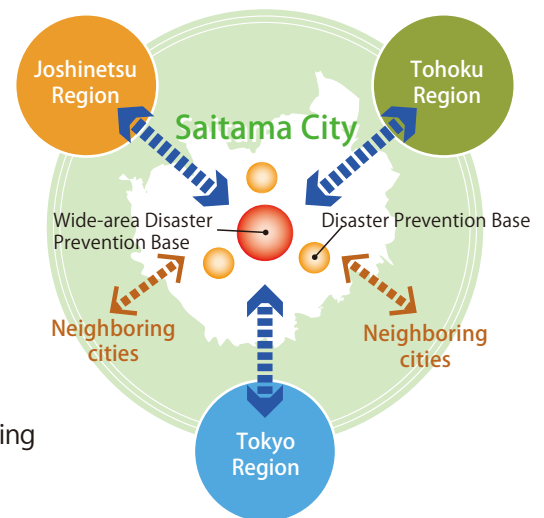
This policy focuses on preparedness during normal times to enable rapid response to emergencies and recovery to take place promptly in order to protect the lives of residents and maintain a safe living environment in the event of a disaster.

### Establish wide-area disaster prevention bases

- 1) Maintenance of open spaces
- 2) Alternative site for Major Disaster Management Headquarters
- 3) Base for the Technical Emergency Control Force (TEC-FORCE) and Emergency Fire Response Teams

### Establish wide-area road networks

- 1) Networking emergency transportation roads and seismic retrofitting buildings along roads
- 2) Improve road network for automobiles



### Policy 4

## Policy to advance preparation for ensuring smooth restoration if suffered from damages

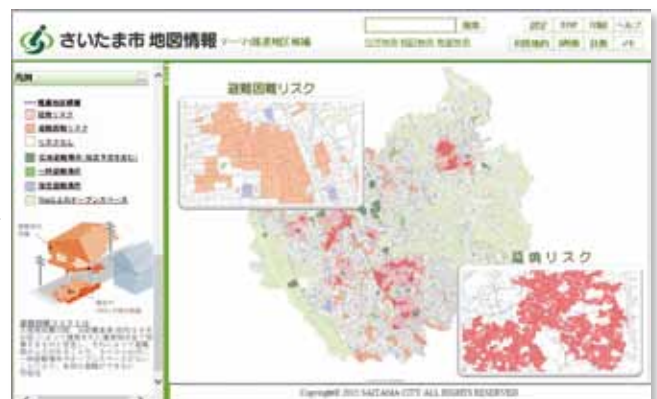
This policy focuses on the preparedness during normal times of the local citizens and municipal government to ensure smooth restoration in the case of a disaster occurred in Saitama City.

### Improve disaster responsiveness

- 1) Identify the risk of disasters by continuous monitoring\*
- 2) Carry out restoration training

### Create and implement the Earthquake Disaster Restoration Action Plan

- 1) Clarify roles and responsibilities in the restoration process



■ Diagram: Disaster risk monitoring by the Geographic Information System (GIS)\*

# Procedures for the Saitama City Disaster Prevention and Urban Development Plan

## Support initiatives of districts for enhancement

Taking into account the intentions of residents, urban development policies and effective measures are being reviewed in order to comprehensively respond to problems faced in districts for enhancement. Furthermore, various projects and measures including social infrastructure projects are undertaken by the Saitama municipal government in order to support initiatives led by local community during the reviewing process.

■ Urban development procedures for districts for enhancement

### Activities led by the locals

- 1) Share disaster risk information
- 2) Organizational system and review initiatives
- 3) Current circumstances and issues from a disaster prevention perspective
- 4) Review the district's urban development policies

### Activities led by the government

- 1) Determine the District Plan
- 2) Carry out cadastral surveys
- 3) Create improvement programs
- 4) Implement improvement programs

## Development of social infrastructure to prepare for future urban structure realization

The Basic Strategies for Improvements of Social Infrastructures, a compilation of top priority issues that should be addressed and policy approaches, will be instituted to target future urban structure realization.

### Basic Strategies for Improvements of Social Infrastructures

#### 1. Improvements in social infrastructures ensure a minimum standard in disaster prevention

- Implement projects that are most urgent in order to reduce Saitama City's risk of disaster to a certain level
- Strive to improve districts that are at high risk of disaster and to ensure the minimum standard in disaster prevention is in place

#### 2. Social infrastructure development contributes to the fostering of facility bases

- Prioritize investment in improving urban functions of facilities in city center and sub-centers
- Emphasis on investing in measures that correspond to the strengthening the functions of facilities in future urban structure realization

#### 3. Promote the development of social infrastructures in one package

- By placing disaster prevention matters as the main task together with other related measures into one package for a more efficient and effective development

#### 4. Maintain and improve basic living environment

- Projects established will be implemented continuously in order to maintain the living environment through road repairs, sewerage system maintenance and etc.

#### 5. Social infrastructure developments causing urban sprawl will not be pursued

- Developments causing urban sprawl and their significances will be examined in depth

## Saitama City Earthquake Restoration Action Policy

The following Saitama City Earthquake Restoration Action Policy is established for citizens, businesses, and municipal government to work hand in hand to promote recovery if Saitama City is affected by a large-scale earthquake disaster.

Saitama City Earthquake Restoration Action Policy

Established on August 26, 2015  
Approved by the Mayor of Saitama City

(Objective)

Article 1 The purpose of this policy is to build a disaster-resistant city and to stabilize and recover citizen's lifestyle through the cooperation of citizens and municipal government in the promotion of measures pertaining to the restoration of the affected area in a comprehensive and organized manner should Saitama City be affected by a large-scale earthquake disaster.

(Definition)

Article 2 The definition of terms used in this policy shall be as prescribed as in Japan's Building Standard Act (Act No. 201 of 1950).

(The Principle of Restoration)

Article 3 The municipal government, citizens, and businesses shall endeavor to cooperate with not only the city's restoration but also preparation duties for restoration.

(The Municipal Government's Duties)

Article 4 After the disaster the municipal government, prefectural government, and relating local public entities shall work closely and draw up a basic plan (Saitama City Urban Restoration Basic Plan) promptly pertaining to the restoration of the city. The plan shall be officially announced to the public and carried out with the cooperation of citizens. Any other measures deemed necessary shall be instituted.

Paragraph 2 In order to continuously investigate and analyst matters pertaining to the severity of natural disasters, mitigate the damage during a disaster and promote smooth restoration within Saitama City, the municipal government shall implement measures on a day-to-day basis with consideration of the severity of natural disasters along with planning for better restoration.

Paragraph 3 The municipal government shall establish training and educational activities in order to improve response capability during a disaster on a day-to-day basis.

(Citizens and businesses' duties)

Article 5 Citizens shall deepen their understanding of disaster prevention urban development on a day-to-day basis, and strive to rebuild their lifestyle and cooperate to aid in the restoration of the city after an earthquake disaster.

Paragraph 2 Businesses shall be aware of their social responsibilities and endeavor to better understand disaster prevention urban development, make efforts to restore the city after the disaster through business activities, and cooperate with earthquake restoration activities.

Paragraph 3 Citizens and businesses shall endeavor to improve necessary building sites and roads, and conserve agricultural lands and natural areas for the promotion of disaster prevention urban development.

(Prioritize Restoration)

Article 6 Saitama City prioritizes the restoration of the city center which is responsible for the core functions of the city, new infrastructure and surface maintenance for necessary bases such as sub-centers and districts.

Paragraph 2 The municipal government shall share the restoration priority and its policies pertaining to the roles to be fulfilled by citizens and businesses for the city's restoration.

Paragraph 3 The municipal government may indicate the restoration priority in the Saitama City Urban Restoration Basic Plan.

This policy is effective from the day on which it is officially published.

## Terminology

<b>Future urban structure</b>	As described in the master plan, future urban structure realization refers to the fundamental figure of the city in the future, as well as land use and disaster prevention policies.
<b>Fire Prevention Districts and Quasi-Fire Prevention Districts</b>	According to the Urban Planning Law, fire-resistant buildings and fire prevention regulations are in place in designated districts in order to prevent fires.
<b>Narrow roads</b>	In general, roads that are less than 4 meters in width may interfere with evacuation and firefighting activities due to collapsed buildings in the time of a large-scaled earthquake.
<b>Water source for firefighting</b>	Facilities such as water tanks that could be used for firefighting in the time of a large-scale earthquake strikes.
<b>District Plan</b>	Based on the Urban Planning Law, the district plan aims to improve and preserve favorable environments that make the most of the district's features. District rules pertaining to the position and usage of the building, height, wall positioning and scale of the site of district facilities (roads, parks, etc.) are as prescribed in the district plan.
<b>Setback distance between the structure building's wall and streets and adjacent properties</b>	In order to build spacious roads and comfortable living environments, a setback distance between the structure's surfaces and the road or land boundaries is determined.
<b>Monitoring</b>	Monitoring in this plan refers to the grasp and process of data including changes in land use and building refurbishment conditions.
<b>Geographic Information System (GIS)</b>	GIS visualizes and shares information about the position of roads and buildings, risk of natural disasters and etc.

Monitoring results are published on Saitama City's website through GIS under Disaster Prevention Urban Development Information Map



[http://www.sonicweb-asp.jp/saitama\\_g](http://www.sonicweb-asp.jp/saitama_g)

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## Saitama City Disaster Prevention "and" Urban Development Plan

Publisher: Policy Section, General Affairs Division, Department of City Planning,

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