Disaster Response in Miyagi Prefecture in the First Year Following the Earthquake and Tsunami

**Digest Version** 

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Date of Issue	March 2015
Editing and Publication	Crisis Measures Division, General Affairs Department
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Printing and Binding	ToyamaAoba Printing Inc.

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# Foreword



March 11, 2011, 2:46 p.m.

This moment and the events that were to follow left a deep impact not only on me, but on many others going through their lives at that point in time.

The powerful tsunami caused by the 9.0 magnitude earthquake devastated our homeland, taking away our families and friends, our sources of livelihood, and the normality of our everyday lives as it swept through. Over 10,000 irreplaceable lives were lost, and significant damage was caused to our land and property.

I would like to offer a prayer in remembrance of all those who lost their lives in this unprecedented disaster and my deepest condolences to their families.

Unfortunately, over 1,000 people remain missing, and many of the disaster victims are still confined to living in emergency temporary housing.

In order to prepare for the Miyagi-Oki (offshore) Earthquake, which occurs on a regular basis and was thus predicted to strike in the coming years, Miyagi Prefecture

established the Earthquake Disaster Countermeasures Promotion Ordinance and had been carrying out various disaster preparedness measures such as seismic retrofitting of prefectural buildings.

However, beyond the extensive damage caused by the large-scale earthquake and tsunami, the disaster also necessitated a response to the Fukushima nuclear power plant accident and a number of other issues that could not be prevented through prior preparations: disruption of local government functions, lack of reliable information directly following the disaster, fuel shortage, and measurement of radiation and radioactivity levels. As a prefecture, we faced considerable challenges in emergency help and rescue operations, providing post-disaster medical care, and helping disaster victims begin rebuilding their lives at evacuation centers.

We are deeply indebted to all those from within Japan and overseas who offered their help throughout the disaster-affected areas in such trying circumstances without any concern for danger to themselves: the Self-Defense Forces, police forces, fire department personnel, Coast Guard, as well as local administrative and disaster preparedness organizations, local governments, businesses, organizations, NGOs, NPOs, and the large number of volunteers who came to help us. All the help we received contributed greatly both in the response to the immediate disaster itself as well as within recovery and reconstruction efforts that have followed. On behalf of the residents of Miyagi, I would like to express my deep gratitude for this support.

Miyagi Prefecture plans to move towards a "creative recovery" that does not merely stop at restoration and uphold the first basic principle (developing a disaster-resistant and secure community) of the Miyagi Prefecture Earthquake Disaster Recovery Plan, which outlines the path to completing recovery by FY 2020. Aiming for progressive community development that is able to address such current issues as decreasing population, falling birth rate, and an aging population, Miyagi will continue to move steadily towards recovery, and as we do so, we appreciate your continued understanding and support.

Viewing it to be the responsibility of our prefecture to accurately assess the conditions both at the time of and following the Great East Japan Earthquake and pass on comprehensive information regarding our response to the disaster to the next generation, this publication aims to be a useful source of information regarding response to natural disasters. Preceded by the publication of an examination of the disaster response by Miyagi Prefecture in the year following the disaster, it includes updated information about affected municipalities and organizations involved in disaster preparedness efforts and was put together with advice from experts within the field.

I would like to express my gratitude to Mr. Arata Hirakawa, president of the Miyagigakuin Women's University, for his valuable guidance and advice, and to Mr. Fumihiko Imamura, director of the International Reserch Instituite of Disaster Science (IRIDeS) at Tohoku University as well as the many others who offered their help and cooperation in providing valuable materials and assisting with various research.

In light of preparations for anticipated large-scale disasters such as an earthquake directly underneath the Tokyo metropolitan area and the Nankai Trough Earthquake, it is my hope that this publication will be utilized by those involved in disaster preparedness and disaster mitigation efforts, helping to create a disaster-resistant society.

March 2015

Yoshihiro Murai Governor of Miyagi Prefecture

宫城県知事 村井嘉浩

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# **Damage Situations**







Damage to road embankments in the Hasekura area of Kawasaki Town (Photo: Kawasaki Town)



March 18: Collapsed building in Hasama-cho, Tome City



Damage to hillside residential land in Seikaen, Aoba Ward, Sendai City (Photo: Sendai City)



March 11: Black smoke rising from oil tanks at the JX Nippon Oil & Energy refinery in Sendai (Photo: 2<sup>nd</sup> Regional Japan Coast Guard Headquarters)



Freight containers scattered by the tsunami at Sendai-Shiogama Port (Takasago Pier)



March 12: Asahi-cho, Kesennuma City



March 14: Minamisanriku Town Disaster Emergency Center



March 11: Minamisanriku Town after the tsunami



April 10: Onagawa Town





March 18: Bus lifted to the top of the Ogatsu Community Center by the tsunami, Ishinomaki City (Photo: Ishinomaki City)

April 30: Ishinomaki City



March 13: Kitahama, Shiogama City



March 13: Yawata-mae, Tagajo City (Photo: Japan Self-Defense Forces)



March 17: Ship carried to the top of a building by the tsunami, Shichigahama Town (Photo: Shichigahama Town)



March 14: JR Hamayoshida Station covered with debris (Photo: Watari Town)



Yuriage, Natori City (Photo: Natori City)

## **Devastation by Tsunami**



Aerial view of Natori City and the tsunami flooding the Sendai Plain (Photo: Japan Self-Defense Forces)



Tsunami rushing towards Yuriage Port, Natori City (Photo:  $2^{\mbox{\tiny nd}}$  Regional Japan Coast Guard Headquarters)





Tsunami flooding the Teizan Canal in Shiogama City (Photo: 2<sup>nd</sup> Regional Japan Coast Guard Headquarters)



Tsunami rushing through the tidal protection forests in Shimonogo, Iwanuma City



Sendai Airport covered with debris (Photo: 2<sup>nd</sup> Regional Japan Coast Guard Headquarters)

Disaster Response in Miyagi Prefecture in the First Year Following the Earthquake and Tsunami

### I. The goal of this examination

The goal of this examination is to accurately understand what took place during the March 11, 2011 Great East Japan Earthquake, and to emphasis the extreme importance to pass down these records to future generations, and the obligation, as one of the affected prefectures, to relay this information.

This booklet outlines the damages from the Great East Japan Earthquake and records the activities carried out by the national, prefectural, and local governments, the Miyagi police department and fire department, the Japan Self-Defense Force (JSDF), and other public utilities-related organizations. This also aims to pass the lessons learned from the disaster down to future generations and improve the awareness of disaster prevention among the citizens and aim to apply basic disaster management materials from other local governments to reflect in our prefecture's own disaster management.

### 2. Examination Method

#### (1) Examination System

In order to examine and document the Great East Japan Earthquake and gather comments regarding this document, the "Miyagi Prefecture Disaster Prevention Council Great East Japan Earthquake Examination and Recording Special Committee," was established on April 25, 2012 with members consisting of academic experts, municipal and public utilities-related personnel.

Furthermore, on April 1, 2012 the disaster response examination and recording team was established in the Crisis Measures Division of the General Affairs Department, Miyagi Prefectural Government.

#### (2) Examination Method

One year after the disaster, the prefectural disaster task force was shut down. The activity status of the national, prefectural, and local governments, the Miyagi police department and fire department, the JSDF, and other public utilities-related organizations were examined and documented based on questionnaires, interviews as well as documented surveys that were used in publications and records from each institution.

### 3. Composition of the Document

This document is composed of the main chapters and appendix.

## [Main Chapters]

<b>Chapter 1</b> Overview and the Characteristics of the	Overview and characteristics of the earthquake and tsunami, damage situation, evacuation
Great East Japan Earthquake	conditions of victims
Chapter 2 Preparations Carried Out Prior to the Great East Japan Earthquake	Outline of past earthquakes and tsunamis, predicted damage, advance countermeasures
Chapter 3 Initial Response and Activities Carried Out	The initial response and activities carried out by the prefecture, municipalities, police and fire departments, the Japan Self-Defense Forces, 2 <sup>nd</sup> Regional Coast Guard Headquarters, the national government, and disaster prevention related organizations
Chapter 4 Emergency Measures and Restoration Measures	Emergency and restoration measures in relation to evacuation shelters, medical relief, victim support, relief supplies, housing, education, industries, debris, etc
Chapter 5 Miyagi Prefecture's Public Relations and Press Activities	Prefecture's response to local media and public relation activities, actions carried out by the media
Chapter 6 Dealing with the Nuclear Power Plant	Response to Onagawa Nuclear Power Plant Incident and Fukushima Daiichi Nuclear Power Plant Accident
Chapter 7 Beginning Restoration	Actions at the national and prefectural levels, outline of the Miyagi Prefecture Reconstruction Plan, the establishment and application of the Great East Japan Earthquake reconstruction fund, development of municipality earthquake disaster reconstruction plans
Chapter 8 Lessons of the Great East Japan Earthquake	46 lessons in 13 subjects that must be taught to future generations
Chapter 9 The Current State and Future Direction of Earthquake and Tsunami Research	The future course of Japan, efforts by Tohoku University
<b>Chapter10</b> The Promotion of Disaster Prevention Measures Applying Lessons of the Great East Japan Earthquake	Developing the foundation of disaster prevention, improve disaster prevention capability, regional collaboration agreements, initial and emergency response, evacuation shelters, victim support, re-building lives, restoration and reconstruction, passing down stories to the future
[Appendix]	
1 National, Prefectural, and Municipal response for	Disaster response at the national, prefectural, and municipal levels from the day of the
the Great East Japan Earthquake (time table)	disaster until March 31, 2012
<b>2</b> Damage Situation in the Municipalities	Damage situation in all 35 municipalities in Miyagi



Miyagi Prefecture, Regions and administrative divisions of JAPAN

## <Explanatory Notes>

\*As a general rule, when the year of the event is not written, the document refers to events that occurred in 2011. \*Names of municipalities, official positions, companies, and institutions are written as used at the time. \*Sources of contributed photos are mentioned in parentheses at the end of the caption.