

Miyagi Prefecture

Great East Japan Earthquake

Reconstruction

Panel Exhibition

Great East Japan Earthquake Overview (1)

Overview of the Earthquake etc.

- Earthquake Name..... The 2011 off the Pacific coast of Tohoku Earthquake (also known as 2011 Great East Japan Earthquake)
- Time..... March 11, 2011 (Friday) 2:46 p.m.
- Epicenter..... Off the Sanriku Coast (38.1°N, 142.5°E)
※Approximately 130 km east of Oshika Peninsula
- Depth of Epicenter..... 24km
- Magnitude..... 9.0
- Maximum Seismic Intensity.... 7 (Kurihara City)

Overview of Damage, etc.

[As of September 30, 2022. Cost of damage as of September 30, 2021.]

- Human Casualties (investigations ongoing)
 - Deaths (including related deaths) 10,569
 - Missing 1,215
 - Serious Injuries 502
 - Minor Injuries 3,615

- Damage to Residential and Non-residential Buildings (investigations ongoing)
 - Completely Destroyed 83,005
 - Seriously Damaged 155,130
 - Partially Damaged 224,202
 - Inundation below floor level.... 7,796
 - Non-residential Buildings Damaged.... 26,796

- Damage Cost (confirmed) 9.0968 trillion yen



Inundated Area in Miyagi Prefecture **327km²**

Equivalent to approximately 60% of the total inundated area (561km) of the six worst affected prefectures (Aomori, Iwate, Miyagi, Fukushima, Ibaraki, Chiba)

Great East Japan Earthquake - Record of Miyagi Prefecture - Digest

This video contains images of the earthquake and tsunami of the Great East Japan Earthquake disaster. Please be aware that you may feel unwell or distressed when viewing these images.



Great East Japan Earthquake Overview (2)

Comparison with the Great Hanshin-Awaji Earthquake

The disaster was a combination of a tsunami, massive power outages, fuel shortages, soil liquefaction, and a nuclear disaster that affected the entire country.

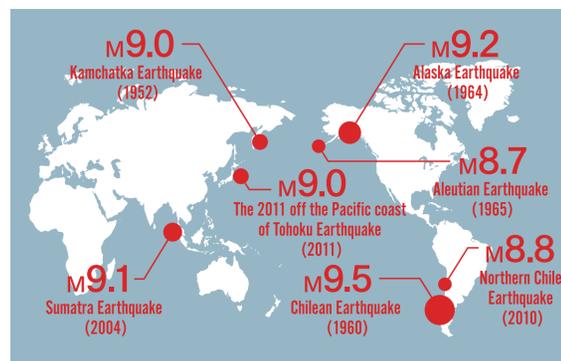
| | Great Hanshin-Awaji Earthquake | Great East Japan Earthquake |
|--|---|--|
| Date and Time | January 17, 1995 5:46 a.m. | March 11, 2011 2:46 p.m. |
| Magnitude | Magnitude 7.3 | ※Moment Magnitude 9.0 |
| Type of Earthquake | Inland Earthquake | Submarine Earthquake |
| Affected Areas | Urban Center | centered around agriculture, forestry, and fisheries region |
| Number of Prefectures With Seismic Intensity of 6 Lower or Above | 1 Prefecture (Hyogo) | 8 prefectures (Miyagi, Fukushima, Ibaraki, Tochigi, Iwate, Gunma, Saitama, Chiba) |
| Tsunami | Tsunami of several dozens centimeters reported, no damage | Large tsunami height observed at multiple locations (maximum height: Soma higher than 9.3m, Miyako higher than 8.5m, Ofunato higher than 8.0m) |
| Damage Characteristics | <ul style="list-style-type: none"> •More than 70% of deaths were caused by asphyxiation and crushing to death by collapsed buildings, etc. •Localized damage in densely populated urban areas | <ul style="list-style-type: none"> •More than 90% of deaths were due to drowning from the tsunami •Extensive damage in areas where agriculture and fishing are predominant |
| Deaths Missing | Deaths: 6,434 Missing: 3 (As of May 19, 2006) | Deaths: 19,759 Missing: 2,553 people (As of March 1, 2022) |
| Damage to Residential Buildings (completely destroyed) | 104,906 | 122,006 (As of March 1, 2022) |
| Application of Disaster Relief Act | 25 cities and towns (2 prefectures) | 241 municipalities (10 prefectures) Including 4 municipalities (2 prefectures) affected by the earthquake with its epicenter in the northern part of Nagano Prefecture |

※Mw: Moment Magnitude

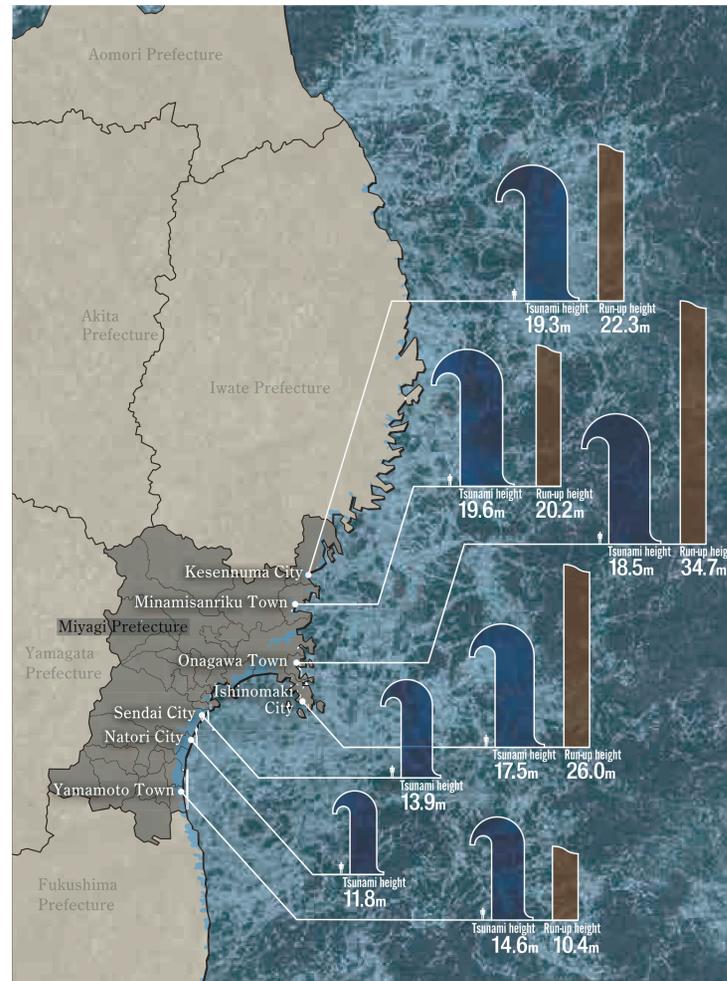
(Citation: 2022 White Paper on Disaster Management, Cabinet Office; Fire and Disaster Management Agency data)

The fourth largest Earthquake in the world

- M9.5 Chilean Earthquake (1960)
- M9.2 Alaska Earthquake (1964)
- M9.1 Sumatra Earthquake (2004)
- M9.0 Kamchatka Earthquake (1952)
- M9.0 The 2011 off the Pacific coast of Tohoku Earthquake (2011)
- M8.8 Northern Chile Earthquake (2010)
- M8.7 Aleutian Earthquake (1965)



The largest tsunami in Japan's recorded history



Tsunami heights at various locations

- Kesennuma City19.3m
- Minamisanriku Town19.6m
- Onagawa Town18.5m
- Ishinomaki City17.5m
- Sendai city13.9m
- Natori City11.8m
- Yamamoto Town14.6m

Maximum tsunami run-up height in each area

- Kesennuma City22.3m
- Minamisanriku Town20.2m
- Onagawa Town34.7m
- Ishinomaki City26.0m
- Yamamoto Town10.4m

Tsunami height

Tsunami height is a measure of the difference between normal sea level and the elevated sea level caused by a tsunami as observed at tide stations and various points. Inundation height is a measure of the height of marks left by a tsunami. It may sometimes be included in the tsunami height.

Run-up height

Run-up height is a measure of the height above sea level of the highest point of land reached by a tsunami.



Kesennuma City



Minamisanriku Town



Iwanuma City



Watari Town

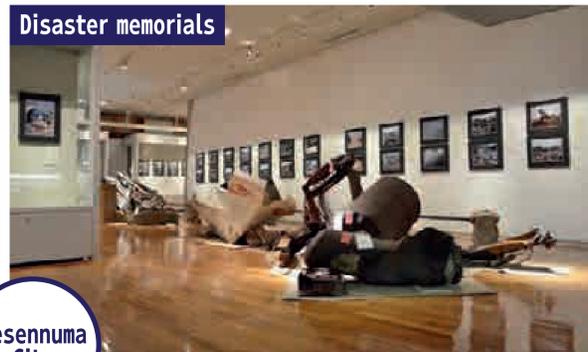
Reconstruction Status by Area

Kesennuma/Motoyoshi Area

Kesennuma City/Minamisanriku Town



- ① Kesennuma City Earthquake Disaster Memorial Park
- ② Commercial complex "Naiwan (Inner Bay)"
- ③ Rias Ark Museum of Art's Permanent Exhibition: "Documentary of Great East Japan Earthquake and Tsunami and History of Tsunami Disaster"
- ④ Ruins of the Great East Japan Earthquake Kesennuma City Memorial Museum
- ⑤ Minamisanriku SAN SAN Shopping Village
- ⑥ Minamisanriku 311 Memorial
- ⑦ Minamisanriku Earthquake Disaster Memorial Park



Disaster memorials

Kesennuma City

③ Rias Ark Museum of Art's Permanent Exhibition: "Documentary of Great East Japan Earthquake and Tsunami and History of Tsunami Disaster"



Disaster memorials

Kesennuma City

④ Ruins of the Great East Japan Earthquake Kesennuma City Memorial Museum



Disaster memorials

Minamisanriku Town

⑥ Minamisanriku 311 Memorial

Construction on many facilities to pass on the lessons from the disaster as well as facilities that serve as symbols of recovery has been completed in coastal areas that suffered major damage from the tsunami caused by the earthquake.

Fixed-Point Observation of the Kesennuma/Motoyoshi Area

Shishiori District, Kesennuma City

Although many buildings were swept away by the tsunami, the surrounding area has since been raised and is beginning to thrive again as houses and restaurants have been built in the area.

Immediately after the disaster



11 years since the disaster



Shizugawa District, Minamisanriku Town

The tsunami swept over a wide area of the city center, causing extensive damage. The Minamisanriku 311 Memorial, a facility for passing down the lessons of the disaster, opened in 2022.

Immediately after the disaster



11 years since the disaster



Tourists spots

Kesennuma City

② Commercial complex "Naiwan (Inner Bay)"



Tourists spots

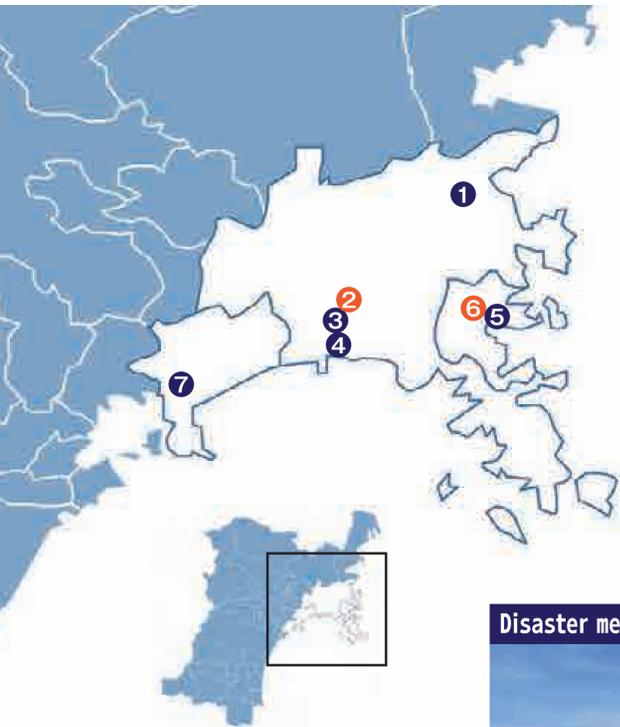
Minamisanriku Town

⑤ Minamisanriku SAN SAN Shopping Village

Reconstruction Status by Area

Ishinomaki Area

Ishinomaki City/Onagawa Town/Higashimatsushima City

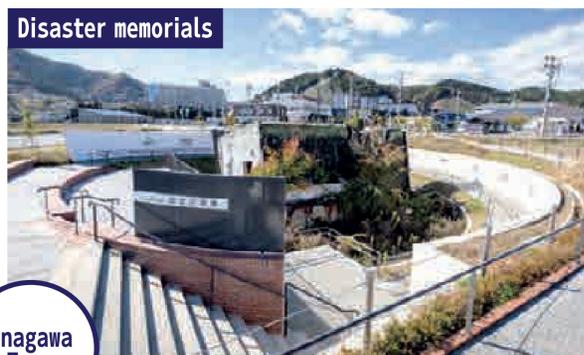


- ① Former Ishinomaki City Okawa Elementary School Disaster Memorial Ruins
- ② Ishinomori Manga Museum
- ③ Former Ishinomaki City Kadonowaki Elementary School Disaster Memorial Ruins
- ④ Ishinomaki Minamihama Tsunami Memorial Park / Miyagi 3.11 Tsunami Disaster Memorial Museum
- ⑤ Former Onagawa Police Box (Disaster Memorial Ruin)
- ⑥ Onagawa Michi-no-Eki Roadside Station
- ⑦ Higashimatsushima City 3.11 Disaster Recovery Memorial Museum / Former Nobiru Station Platform (Disaster Memorial Ruins)



Ishinomaki City

④ Ishinomaki Minamihama Tsunami Memorial Park / Miyagi 3.11 Tsunami Disaster Memorial Museum



Onagawa Town

⑤ Former Onagawa Police Box (Disaster Memorial Ruin)



Higashimatsushima City

⑦ Higashimatsushima City 3.11 Disaster Recovery Memorial Museum / Former Nobiru Station Platform (Disaster Memorial Ruins)

Construction on many facilities to pass on the lessons from the disaster as well as facilities that serve as symbols of recovery has been completed in coastal areas that suffered major damage from the tsunami caused by the earthquake.

Fixed-Point Observation of the Ishinomaki Area

Kadonowaki District, Ishinomaki City

The Ishinomaki Minamihama Tsunami Memorial Park opened in March 2021, and in June of the same year, the Miyagi 3.11 Tsunami Disaster Memorial Museum opened on its premises.



Immediately after the disaster



11 years since the disaster

Washinokamihama District, Onagawa Town

In the center of Onagawa Town, three buildings, including the Enoshima Kyosai Kaikan building, were pulled from their foundations and toppled over by the tremendous water pressure of the tsunami.



Immediately after the disaster



11 years since the disaster



Ishinomaki City

② Ishinomori Manga Museum



Onagawa Town

⑥ Onagawa Michi-no-Eki Roadside Station

Reconstruction Status by Area

【Sendai Coastal Area】

Sendai City/Matsushima Town/Rifu Town/Shiogama City/Shichigahama Town/
Tagajo City/Natori City/Iwanuma City/Watari Town/Yamamoto Town



- ① Matsushima Town Ishidasawa Disaster Prevention Center
- ② Shiogama City Disaster Prevention Center
- ③ Sendai 3/11 Memorial Community Center
- ④ Ruins of the Great East Japan Earthquake: Sendai Arahama Elementary School
- ⑤ JR Fruit Park Sendai Arahama
- ⑥ Natori City Earthquake Disaster Memorial Center
- ⑦ Natori Cycle Sports Center
- ⑧ Iwanuma City Millennium Hope Hills Exchange Center
- ⑨ Yamamoto Town Disaster Prevention Base/ Yamashita Regional Exchange Center
- ⑩ Ruins of the Great East Japan Earthquake: Nakahama Elementary School



Disaster memorials



Sendai city

④ Ruins of the Great East Japan Earthquake: Sendai Arahama Elementary School

Disaster memorials



Iwanuma City

⑧ Iwanuma City Millennium Hope Hills Exchange Center

Disaster memorials



Yamamoto Town

⑩ Ruins of the Great East Japan Earthquake: Nakahama Elementary School

Tourists spots



Sendai city

⑤ JR Fruit Park Sendai Arahama

Tourists spots



Natori City

⑦ Natori Cycle Sports Center

Construction on many facilities to pass on the lessons from the disaster as well as facilities that serve as symbols of recovery has been completed in coastal areas that suffered major damage from the tsunami caused by the earthquake.

Fixed-Point Observation of the Sendai Coastal Area

Yuriage District, Natori City

The entire Yuriage district can be seen from the top of Hiyoriyama, a small hill located in the Natori City Earthquake Disaster Memorial Park, which serves as a place to pass on the memories and lessons of the disaster to future generations.

Immediately after the disaster



11 years since the disaster



Arahama District, Watari Town

In the Arahama district of Watari Town, the Torinoumi Sports Park was newly built in addition to the market and shopping center, and people of all ages work up a sweat playing a variety of sports.

Immediately after the disaster



11 years since the disaster



Kesennuma
City



Sanriku Expressway opens (2021)

This is a major transportation artery connecting Aomori, Iwate, and Miyagi prefectures with a total length of 359 kilometers. On this transportation artery, the Kesennuma Bay Crossing Bridge, a new landmark between the Kesennuma Port IC and the Urushima-Oshima IC, is now open to traffic.

Minamisanriku
Town



Minamisanriku Winery opens (2020)

This is the first winery facility in Minamisanriku Town that combines the functions of winemaking and wine storage, together with a shop and terrace where visitors can enjoy the excellent pairing of wine with local cuisine.

Ishinomaki
City



Introduction of special fishery zone (2013)

The "Act on Special Zones for Reconstruction in Response to the Great East Japan Earthquake (Act on Special Zones for Reconstruction)" was enacted to facilitate early reconstruction of the severely damaged fisheries industry. The Momonoura area of Ishinomaki City was recognized as Japan's first special fishery zone.

Onagawa
Town



Seapal-pier Onagawa opens (2015)

Opened along the brick promenade leading from Onagawa Station to the sea, Seapal-pier Onagawa is a center of hospitality where visitors can enjoy gourmet food, various hands-on experiences, or bring back a gift from the wide variety of souvenirs available.

Tagajo
City



The Disaster Science Department is established at Tagajo High School (2016)

The Disaster Science Department, the second of its kind in Japan, was newly established to train specialists in disaster prevention in order to protect people from any disasters that may occur in the future in Japan and abroad.

Examples of Major Reconstruction Efforts

Many disaster-affected areas have not only been restored to their original states, they have also incorporated a variety of innovative community development ideas with an eye to the future. This panel introduces the reconstruction of towns that have been reborn and are full of vitality.

Sendai
city



Tobu Reconstruction Road opens(2019)

The Tobu Reconstruction Road, an elevated road built in the disaster-stricken coastal area, is now open to traffic. Multiple defensive features such as coastal seawalls and the Sendai-Tobu Road will reduce the power of tsunamis.

Sendai
city



First new medical school in 37 years opens (2016)

The Tohoku Medical and Pharmaceutical University established the first new medical school in Japan in 37 years, is designed to resolve the shortage and uneven distribution of doctors in Tohoku and to train doctors with a wide range of general medical skills.

Natori
City



Kawamachi Terrace Yuriage opens (2019)

This new commercial facility in Yuriage is designed to illuminate the rebirth of the Yuriage area and to serve as a riverside terrace for relaxation. It is lined with restaurants, seafood and stores to purchase sweets.

Natori
City
Iwanuma
City



Privatization of Sendai Airport (2018)

Sendai Airport was the first government-run airport in Japan to be privatized. Sendai International Airport Co.,Ltd. manages the terminal building, cargo and runway management, and other operations as a single entity.

Watari
Town



Construction is completed on the "Ichigo Danchi", a large strawberry production center (2013)

In Watari Town, most of the strawberry farmland was destroyed by the tsunami and the salt water, but construction was completed on the Ichigo Danchi, a large strawberry production center with rows of greenhouses and a total cultivation area of approximately 40 hectares.

Making Disasters "Our Own Problem"

If a disaster like the Great East Japan Earthquake were to occur, what would you need to do?

Let's think about what you should do to prepare in your daily life.

Prepare food and beverages, etc.

- You need to stockpile at least 3 days' worth of water and food! It's even better if you have a week's worth.
For example, water for 1 person = 3 liters x 3 days = 9 liters
For 4 people = 9 liters x 4 people = 36 liters

Emergency Food

For infants and toddlers:

- Powdered/liquid milk
- Retort pouch baby food
- Snacks that your infant or toddler is used to eating



For people with allergies:

- Allergen-free emergency food
- Allergy-friendly foods that you eat regularly
- Network with others who have the same condition

For people who have trouble swallowing or other physical issues:

- Soft food or food that goes down easily (retort-pouch curry, retort-pouch porridge, etc.)

Things you can practice on a regular basis

Rolling Stock Method

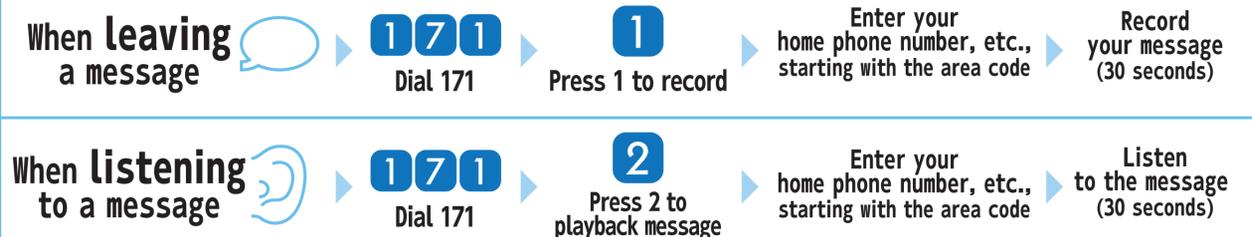
- Buy extra amounts of the foods you eat every day, and replenish what you use

Prepare items that can help you feel a sense of normalcy even in times of disaster.

Confirm your safety confirmation method and evacuation site

● How to use the Disaster Emergency Message Dial (171) service

Clearly state your name, where you are, and where you are headed



● How to use the Disaster Emergency Broadband Message Board

Your message can be registered with text.

The content of the messages can be checked and added to from Japan and abroad.



Things you can practice on a regular basis

Know disaster risks (which areas are dangerous)

- Check hazard maps (e.g., landslide hazard zones, flood zones)
- Routinely check the area

Ministry of Land, Infrastructure, Transport and Tourism's Hazard Map Portal Site

<https://disaportal.gsi.go.jp/>



Confirm where you can get disaster and evacuation information:

- Information about the weather: TV, radio, online
- Information about river levels: Prefectural river basin information

Create a personalized evacuation plan for your family

- A personal evacuation plan to prepare for a disaster and includes a chronological order of "when," "who," and "what" in accordance with each family's composition and living environment.



Major Domestic and International Support Received by Miyagi Prefecture

1 Volunteer activities related to restoration and reconstruction (as of November 30, 2022)

- Number of social welfare organizations accepting disaster relief volunteers: 13 in 8 cities and 5 towns
- Number of volunteers (total): 778,602 (March 12, 2011 to November 30, 2022)

*By the end of March 2015, all municipal disaster volunteer centers in the prefecture were closed, and activities are being carried out at permanent volunteer centers, etc.



2 Personnel support from other prefectures (as of January 1, 2023)

- Personnel support for Miyagi Prefectural Government: 18
- Personnel support for municipalities: 61



3 Donations for Disaster Victims (End of reception) 27,312,036,000 yen (206,624 donations)

- Domestic: 27,051,433,000 yen (206,407 donations)
- Overseas: 260,603,000 yen (217 donations)



4 Donations for Recovery Efforts (as of July 31, 2022) 34,998,463,000 yen (13,959 donations)

- Domestic: 18,674,018,000 yen (13,893 donations)
- Overseas: 16,324,445,000 yen (66 donations)



5 Donation for Children Orphaned by the Great East Japan Earthquake (as of July 31, 2022) 12,487,659,000 yen (21,044 donations)

- Domestic: 12,466,189,000 yen (20,961 donations)
- Overseas: 21,470,000 yen (83 donations)

※ The totals for donations for recovery efforts, donations for disaster victims, and donation for children orphaned by the Great East Japan Earthquake may not add up to the donation total due to fractional calculations.



Thank you for your support for Miyagi and Tohoku!

On that day, we looked on powerlessly as our cities laid in ruins.
However, the warm support from everyone around the world pushed us forward.
Messages of support that arrived one after another.
The smile of volunteers who worked with us.
Fund raising charity events held around the world.
Our recovery could not have come this far without everyone's support.
With your support, we will continue the recovery efforts,
one step at a time, as we have until now, and from now on.

- | | | | | |
|--------------------|------------------------|---------------|-----------------|--------------------|
| Sendai city | Ishinomaki City | Shiogama City | Kesenuma City | Shiroishi City |
| Natori City | Kakuda City | Tagajo City | Iwanuma City | Tome City |
| Kurihara City | Higashimatsushima City | Osaki City | Tomiya City | Zao Town |
| Shichikashuku Town | Ogawara Town | Murata Town | Shibata Town | Kawasaki Town |
| Marumori Town | Watari Town | Yamamoto Town | Matsushima Town | Shichigahama Town |
| Rifu Town | Taiwa Town | Osato Town | Ohira Village | Shikama Town |
| Kami Town | Wakuya Town | Misato Town | Onagawa Town | Minamisanriku Town |

