

### (i) Waste from the countermeasure area

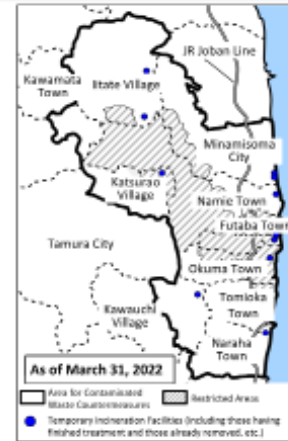
- Contaminated **waste from the countermeasure area\*** designated by the Minister of the Environment that satisfies certain requirements

\* An area that satisfies certain requirements, such that it is found that waste located in that area is likely to be contaminated to the extent requiring special management

(= municipalities containing former Restricted Areas and former Deliberate Evacuation Areas)

<Examples of waste from the countermeasure area>

- Debris due to the earthquake and the tsunami
- Waste from demolition of houses, etc.



### (ii) Designated waste

- Waste contaminated with radioactive materials derived from the accident **whose radioactivity concentration is found to exceed 8,000 Bq/kg and which is designated\*** by the Minister of the Environment

\* In light of the survey results concerning contamination status of incinerated ash at incineration facilities and based on applications filed by possessors of waste, the Minister of the Environment makes a designation when radioactivity concentration of waste is found to exceed 8,000 Bq/kg

<Examples of designated waste>

- Incinerated ash
- Agricultural and forestry waste (rice straw, compost), etc.



Incinerated ash



Agricultural and forestry by-products (rice straw)

⇒ The national government takes charge of the treatment of waste from the countermeasure area and designated waste

Prepared by the Ministry of the Environment

At present, the area extending over 10 municipalities in Fukushima Prefecture is designated as an Area for Contaminated Waste Countermeasures (an area designated by the Minister of the Environment as an area in which the national government needs to take charge of the collection, transport, storage and disposal of waste located therein; meaning the same as a Special Decontamination Area). Waste discharged from this area is being treated by the Ministry of the Environment as waste from the countermeasure area.

Waste contaminated with radioactive materials derived from the accident whose radioactivity concentration exceeds 8,000 Bq/kg is to be treated as designated waste by an appropriate method under the responsibility of the national government.

Included in this reference material on March 31, 2023

## Waste

### Progress of Disposal of Disaster Waste Directly Governed by the National Government in Designated Areas in Fukushima Prefecture



Temporary Incineration Facility in Okuma Town (December 2017)

Disaster waste has been disposed of based on the Treatment Plan on Waste within the Management Areas (partial revision on December 26, 2013).

[Amount of Waste within the Management Areas having been transported to Temporary Storage Sites]

○ As of the end of November 2023, a total of approx. 3.39 million tons of waste had been transported to Temporary Storage Sites (of which, approx. 580,000 tons were incinerated, approx. 2,350,000 tons were recycled).

[Removal of tsunami rubble]

○ Tsunami rubble in former Restricted Areas was all transported to Temporary Storage Sites in March 2016, except for such rubble left in Restricted Areas.

[Installation of Temporary Incineration Facilities]

In operation	Namie Town, Okuma Town, Futaba Town i and Futaba Town ii
Completion of operation	Kawauchi Village, Iitate Village (Komiya district), Tomioka Town, Minamisoma City i, Minamisoma City ii, Katsurao Village, Iitate Village (Warabidaira district), and Naraha Town

\*Tamura City and Kawamata Town use existing waste disposal facilities for disposing of disaster waste.



Demolition of a damaged house, etc.

Prepared by the Ministry of the Environment

Waste from the countermeasure area in Fukushima Prefecture has been disposed of based on the Plan on Waste from the Countermeasure Area, which was revised in December 2013.

Such waste, which includes tsunami rubble, debris of damaged houses, and waste from houses after cleaning-up, has been transported sequentially to Temporary Storage Sites. As of the end of November 2023, a total of approx. 3.39 million tons had already been transported. Transported waste is recycled as much as possible.

It was decided to incinerate combustible waste to reduce volume at Temporary Incineration Facilities constructed at 12 locations in nine municipalities. As of the end of December 2023, four such facilities were in operation and waste is being steadily incinerated.

Included in this reference material on February 28, 2018

Updated on March 31, 2024

## Ensuring Safety for Temporary Storage of Designated Waste

### Temporary storage work (in the case of agricultural and forestry waste)



Elevate a certain parcel of land by adding soil



Put waste in tough bags and surround those bags with sandbags



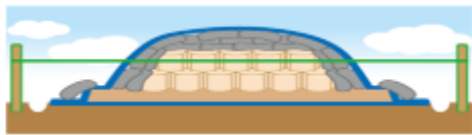
Cover them up with soil to shield radiation



Cover the whole area with an impermeable sheet

### Structure of a Temporary Storage Site (in the case of agricultural and forestry waste)

- Take measures to prevent scattering and runoff of waste
- Take required measures against radiation (isolation or shielding using sandbags, etc.)
- Take measures to prevent infiltration of rainwater using impermeable sheet, etc.



### Checking of storage status

The status of storage at Temporary Storage Sites is to be checked to ensure that designated waste is properly stored in compliance with the standards, etc. specified in the Act on Special Measures.



Staff of the Regional Environmental Office checking the storage status

Prepared based on the website, "Information on Disposal of Radioactive Waste," of the Ministry of the Environment, etc.

Types of designated wastes include ash left after incinerating waste contaminated by radioactive materials, sludge generated through sewage treatment, soil generated at water treatment plants to supply tap water (p.42 of Vol. 2, "Waterworks System"), agricultural and forestry waste, such as rice straw and pasture grass, etc.

As of the end of September 2023, there was a total of over 450,000 tons of designated waste in 10 prefectures, including Tokyo Metropolis. The waste is temporarily being stored at incineration facilities, water treatment plants, sewage treatment facilities, farmland, etc., where it was generated, until the national government establishes a proper disposal system.

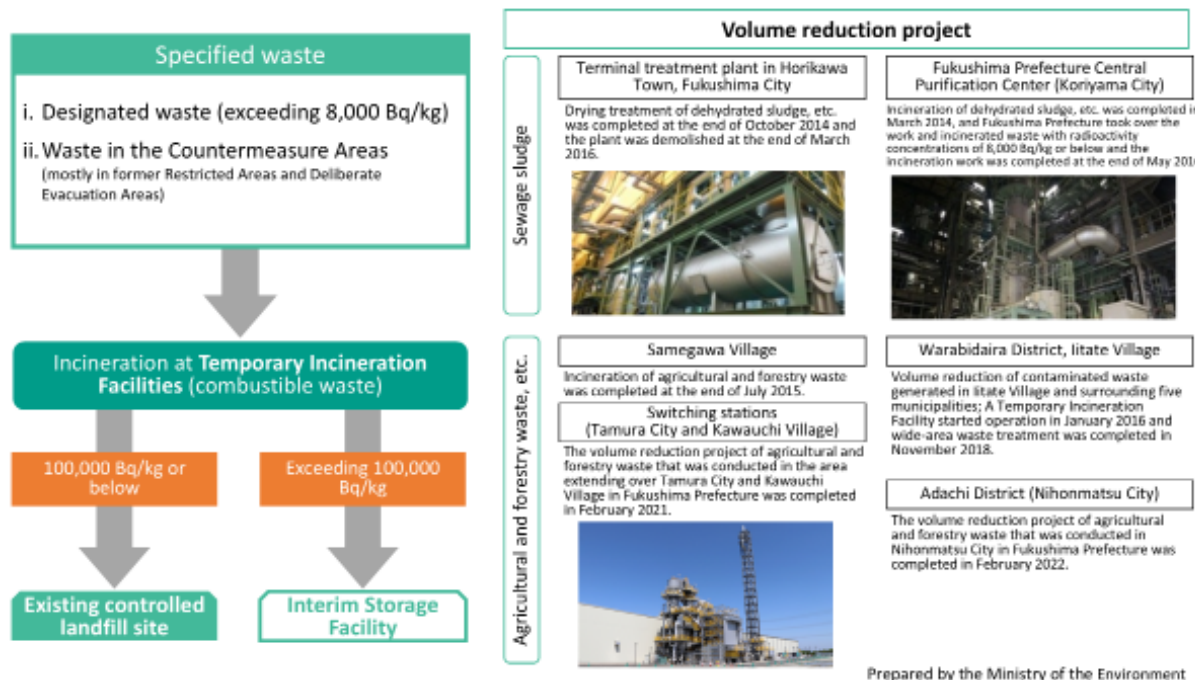
In accordance with the Act on Special Measures Concerning the Handling of Environment Pollution by Radioactive Materials, measures to prevent scattering and runoff of the waste are being taken and the materials are stored by covering them with impermeable sheets to prevent infiltration of rainwater. Officials of the Ministry of the Environment visit various locations and check the status of temporary storage periodically to ensure safe and proper storage of designated waste.

Included in this reference material on January 18, 2016

Updated on March 31, 2024

## Procedures for Disposal of Designated Waste in Fukushima Prefecture

- The Ministry of the Environment has been carrying out a program to reduce volume and stabilize properties of designated waste through incineration and drying, etc.
- With regard to designated waste generated in Fukushima Prefecture, waste with radioactivity concentrations exceeding 8,000 Bq/kg but 100,000 Bq/kg or below is to be transported to the existing controlled landfill site, while waste with radioactivity concentrations exceeding 100,000 Bq/kg is to be transported to the Interim Storage Facility.





In Fukushima Prefecture, designated waste with radioactivity concentration exceeding 8,000 Bq/kg but 100,000 Bq/kg or below is to be transported to the existing controlled landfill site, while designated waste with radioactivity concentration exceeding 100,000 Bq/kg is to be transported to the Interim Storage Facility.

Additionally, designated waste is incinerated, dried or otherwise handled to reduce volume and stabilize their properties in Fukushima Prefecture.

Included in this reference material on January 18, 2016

Updated on March 31, 2023



Waste		Landfill Disposal of Specified Waste at Controlled Landfill Site	
<ul style="list-style-type: none"> <li>○ In the specified waste landfill project, transportation of specified waste was commenced on November 17, 2017, and was completed on October 31, 2023.</li> <li>○ At the Clean Center Futaba, transportation of specified waste was commenced on June 1, 2023.</li> </ul>			
<b>Developments concerning the Specified Waste Landfill Facility</b> <ul style="list-style-type: none"> <li>○Dec. 14, 2013: The national government asked Fukushima Prefecture, Tomioka Town, and Naraha Town for consent to accept the construction of the site.</li> <li>○Dec. 4, 2015: Fukushima Prefecture, Tomioka Town, and Naraha Town expressed their intention to approve the program.</li> <li>○Apr. 18, 2016: Specified Waste Landfill Facility (former Fukushima Eco Tech Clean Center) was nationalized.</li> <li>○Jun. 27, 2016: The national government concluded a safety agreement with Fukushima Prefecture and the two municipalities.</li> <li>○Nov. 17, 2017: <b>Transport of waste was commenced.</b></li> <li>○Oct. 31, 2023: <b>Transportation of specified waste was completed.</b></li> </ul>		<b>Waste to be landfilled and duration of waste transport</b> <p>[Waste to be landfilled] (* Waste with radioactivity concentrations not exceeding 100,000 Bq/kg)</p> <ul style="list-style-type: none"> <li>○Waste from the countermeasure area</li> <li>○Designated waste in Fukushima Prefecture</li> <li>○Household waste from 8 Futaba County municipalities</li> </ul> <p>[Duration of waste transport]</p> <ul style="list-style-type: none"> <li>○Waste from the countermeasure area and designated waste in Fukushima Prefecture: Approx. 6 years (Completed at the end of October 2023)</li> <li>○Household waste from 8 Futaba County municipalities: Approx. 10 years</li> </ul>  <p>Specified Waste Landfill Facility</p>	
<b>Developments concerning the Clean Center Futaba</b> <ul style="list-style-type: none"> <li>○Aug. 5, 2019: The MOE concluded a basic agreement with the Futaba District Broader Municipality Association and Fukushima Prefecture.</li> <li>○Aug. 7, 2020: The MOE concluded an implementation agreement with the Futaba District Broader Municipality Association.</li> <li>○Dec. 2020: The MOE commenced the development work.</li> <li>○Mar. 31, 2023: The development work was completed.</li> <li>○Jun. 1, 2023: <b>Transportation of specified waste was commenced.</b></li> </ul>		<b>Waste to be landfilled and duration of waste transport</b> <p>[Waste to be landfilled] (* Waste with radioactivity concentrations not exceeding 100,000 Bq/kg)</p> <ul style="list-style-type: none"> <li>○Household waste from 8 Futaba County municipalities</li> <li>○Industrial waste and general waste from business activities generated in association with infrastructure development activities in Futaba County</li> <li>○Specified waste generated in association with demolition of damaged buildings, etc. in Specified Reconstruction and Revitalization Base Areas</li> </ul> <p>[Duration of waste transport]</p> <ul style="list-style-type: none"> <li>○Transportation of specified waste was commenced in June 2023.</li> </ul>  <p>Clean Center Futaba</p>	

Designated waste, etc. with radioactivity concentrations not exceeding 100,000 Bq/kg generated in Fukushima Prefecture are to be disposed of promptly at the existing controlled landfill sites (Specified Waste Landfill Facility and Clean Center Futaba).

In order to implement this project at the Specified Waste Landfill Facility, the national government first asked Fukushima Prefecture for consent to accept the construction of an Interim Storage Facility in December 2013, and then provided explanations to Tomioka Town and Naraha Town, and their assemblies and residents.

In December 2015, consent was obtained from Fukushima Prefecture, Tomioka Town and Naraha Town for the implementation of this project. The national government nationalized the existing controlled landfill site in April 2016 and concluded a safety agreement with Fukushima Prefecture and the two municipalities in June 2016. Preparatory work was conducted thereafter and the transportation of specified waste was completed at the end of October 2023. Additionally, the Ministry of the Environment (MOE) has endeavored to provide related information positively through the Reprun Fukushima, a specified waste landfill information center, which commenced operation in August 2018.

Regarding the disposal of waste, etc. generated in association with the development of the Specified Reconstruction and Revitalization Base Areas, the MOE concluded a basic agreement with the Futaba District Broader Municipality Association and Fukushima Prefecture on August 5, 2019, concerning the utilization of the controlled landfill site owned by the Association. Transportation of specified waste was commenced in June 2023.

To steadily facilitate disposal of waste contaminated by radioactive materials, utmost efforts will be continued to properly carry out this project with safety as the top priority and to build a stronger relationship of trust with local residents.

Included in this reference material on January 18, 2016  
Updated on March 31, 2024

# Status of the Five Prefectures concerning Designated Waste

## Miyagi Prefecture

[Municipal mayors' conference]

1st to 4th: Oct. 2013 to Nov. 2013

5th: Jan. 20, 2014

→ Three candidate sites for detailed surveys were presented (Fukayamabaki, Karibara City, Shinohara, Tawawa-cho, Tashirodake, Kori Town).

6th: Jul. 25, 2014

→ Minister of the Environment (SHIRAKI) attended the conference and asked again for residents' understanding on the implementation of detailed surveys.

7th (held by the prefecture): Aug. 4, 2014

→ The prefectural governor announced the acceptance of a detailed survey on a consensus of all municipal mayors.

Detailed surveys were commenced at the three candidate sites in August 2014. However, an on-site survey was not possible due to protests by Kori Town (also suspended in 2023).

Apr. 5, May 29, and Oct. 13, 2015: Forum targeting prefectural residents

Oct. 16 Nov. 2015 (three): Opinion exchange with Kori Town with the participation of experts

8th: Dec. 14, 2015

→ The developments concerning detailed surveys were explained and views were exchanged.

9th: Mar. 29, 2016

→ Results of the measurement for designated waste and approaches of the Ministry of the Environment were explained.

Apr. 15, 2016: The prefecture requested the suspension of an on-site survey until certain prefectural policy is decided.

10th (held by the prefecture): May 27, 2016

→ The prefecture presented its draft policy on disposal of waste with radioactivity concentrations not exceeding 8,000 Bq/kg (excluding designated waste).

11th (held by the prefecture): Nov. 8, 2016

→ Results of the measurement for waste other than designated waste were released. The prefecture presented its draft policy on disposal of waste with radioactivity concentrations not exceeding 8,000 Bq/kg (excluding designated waste).

12th (held by the prefecture): Dec. 27, 2016

→ Agreement on the prefectural disposal policy was not obtained from Karibara City and Torise City, and it was decided to have discussions again.

13th (held by the prefecture): Jan. 30, 2017

→ The prefecture presented its new draft disposal policies such as to require each district to independently treat contaminated waste generated therein.

14th (held by the prefecture): Jul. 15, 2017

→ Agreement was reached on the draft disposal policy presented at the previous meeting.

Test incineration was completed in four districts, Ishinomaki, Sennan, Kurokawa and Osaki. →

Ishinomaki: Full-fledged incineration was completed.;

Kurokawa: Completed with the application to farmland;

Sennan and Osaki: Full-fledged incineration is underway.

## Tochigi Prefecture

[Municipal mayors' conference]

1st to 4th: Apr. 2013 to Aug. 2013

4th: Dec. 24, 2013

→ Selection method was determined.

Jul. 4th, 2014

→ One candidate site for detailed survey was presented (Torishirai, Shioga Town).

9th and 10th: Jul. 2014 to Nov. 2014

May 14, (Jun. 22, and Sep. 13, 2015): Forum targeting prefectural residents

Oct. 30, 2015

Survey of the effects of the heavy rain in Torishirai, Shioga Town

Dec. 2, 2015

The mayor of Shioga Town declared the surrender of the designation as a candidate site for detailed survey.

10th: May 21, 2016

→ Remeasurement for designated waste was decided.

10th: Oct. 17, 2016

→ Results of the remeasurement were released and future directions were presented.

Mar. 4th, 2017: Results of the confirmation of intentions of people temporarily storing waste by themselves were released.

[Meeting of mayors of municipalities concerning measures to ease burdens of farm households storing waste by themselves]

1st: Jul. 10, 2017

→ Draft of policy for measures to ease burdens of farm households storing waste by themselves were presented.

2nd: Nov. 26, 2018

→ Agreement was reached on efforts to muster opinions of municipalities, including those on remeasurement.

Mar. 19, 2019: Results of the remeasurement was released.

3rd: Jun. 20, 2020

→ Participants confirmed future directions.

Jun. 2, 2021: The Ministry of the Environment asked Nasushiobara City to cooperate in provisional centralized collection of waste (Oct. 12, 2021: The transport of designated waste having been stored by individual farm households was started in the city. Provisional centralized collection was completed in Mar. 2022.)

Mar. 24, 2022: Nasu Town decided on the site for a provisional storage site

Apr. 13, 2022: Niha City decided to establish a provisional storage site. (Provisional centralized collection was completed in Sep. 2022.)

May 15, 2023: Ohtawara City decided to establish a provisional storage site.

Efforts are to be made continuously to seek agreement on detailed surveys and make adjustments with the prefecture and municipalities storing waste regarding measures to ease the burden on farm households storing waste by themselves and also conduct provisional centralized storage of waste.

## Chiba Prefecture

[Municipal mayors' conference]

1st to 3rd: Apr. 2013 to Jan. 2014

4th: Apr. 17, 2014

→ Selection method was determined.

Apr. 24, 2015

→ One candidate site for detailed survey was presented.

[Part of the premises of TEPCO's Chiba Thermal Power Station (Chuo Ward, Chiba City)]

May 20 and Jun. 2, 2015: Chiba City Assembly Plenary Meeting

Jun. 8 and Jun. 10, 2015: Chiba City Assembly and the city mayor requested fresh discussions.

Jun. 29, Jul. 7, 13 and 20, and Aug. 7, 2015: Explanations were given to community organization leaders and residents of Chiba City.

Dec. 14, 2015: Response to the request for fresh discussions was made.

Jun. 28, 2016: Chiba City requested for rescission of the designation.

Jul. 22, 2016: Designation was rescinded for designated waste in Chiba City.

Efforts are to be made continuously to seek agreement on detailed surveys.

## Ibaraki Prefecture

[Municipal mayors' conference]

1st: Apr. 12, 2013

2nd: Jun. 27, 2013

3rd: Dec. 25, 2013

4th: Jan. 28, 2015

[Meeting of mayors of municipalities where waste is temporarily stored]

1st: Apr. 6, 2015

2nd: Feb. 4, 2016

→ The policy to continue on-site storage and promote staged disposal was determined.

Mar. 31, 2017: Remeasurement for designated waste, etc. in the prefecture was conducted and the results were released.

## Gunma Prefecture

[Municipal mayors' conference]

1st: Apr. 19, 2013

2nd: Jul. 2013

3rd: Dec. 26, 2016

→ The policy to continue on-site storage and promote staged disposal was determined.

Prefectures other than Fukushima Prefecture which are in urgent need to secure Temporary Storage Sites for designated waste (Miyagi Prefecture, Tochigi Prefecture, Chiba Prefecture, Ibaraki Prefecture and Gunma Prefecture) are taking measures in accordance with the circumstances of respective prefectures, based on discussions at municipal mayors' conferences, while ascertaining the current status through the measurement of radioactivity concentrations.

Regarding candidate sites for detailed surveys, Miyagi, Tochigi and Chiba Prefectures followed selection methods determined through discussions at expert meetings and municipal mayors' conferences, and Miyagi presented selected candidate sites in January 2014, Tochigi in July 2014 and Chiba in April 2015. However, detailed surveys have not been conducted due to a failure to obtain understanding of relevant regions.

In the meantime, Miyagi Prefecture determined its policy that each municipality is to make efforts to dispose of contaminated waste with radioactivity concentrations not exceeding 8,000 Bq/kg under the initiative of the prefectural government, and the Ministry of the Environment (MOE) is offering financial and technical support. As part of such efforts, test incineration was commenced sequentially in four districts (Ishinomaki, Kurokawa, Sennan and Osaki) from March 2018 and was completed by July 2019. As of the end of September 2023, waste disposal was completed through full-fledged incineration, etc. in the Ishinomaki district and Kurokawa district, and full-fledged incineration was underway in the Sennan and Osaki districts.

In November 2018, the national government presented a provisional policy for volume reduction and centralized collection of designated waste by the unit of municipality, targeting Tochigi Prefecture and municipalities storing designated agricultural and forestry waste, with the aim of easing burdens of farm households that have been storing designated waste by themselves, while maintaining the basic policy to ultimately develop long-term management facilities. Agreement was reached on the provisional policy. Additionally, it was confirmed that the national government will compile its approach for the selection of provisional storage sites and make efforts to select relevant sites as promptly as possible in collaboration with Tochigi Prefecture and relevant municipalities. In June 2021, the MOE asked Nasushiobara City to cooperate in the provisional centralized collection of designated agricultural waste having been stored by individual farm households and disposal of waste with radioactivity concentrations not exceeding 8,000 Bq/kg after removal of their designation as designated waste. From October 2021 to March 2023, the MOE conducted transportation of designated waste from farm households to the provisional storage site in the city. Out of the transported designated waste, designated agricultural waste whose radioactive concentrations have decreased to 8,000 Bq/kg or lower was incinerated with other general waste after going through procedures for designation removal. In Nikko City, transportation of designated waste to the provisional storage site was completed, and Nasu Town and Ohtawara City respectively decided on a provisional storage site. In this manner, efforts are being made by relevant municipalities.

Chiba Prefecture is also continuing efforts to obtain understanding from the local residents for the implementation of a detailed survey concerning long-term management facilities.

Ibaraki and Gunma Prefectures determined the policies to continue on-site storage and promote staged disposal respectively in February 2016 and December 2016. Based on the determined policies, both prefectures will repair or reinforce storage sites as necessary and will dispose of designated waste whose radioactivity concentrations have reduced to 8,000 Bq/kg or lower at existing disposal facilities in a staged manner.

Included in this reference material on March 31, 2016

Updated on March 31, 2024