

Waste

Waste to be Treated by the National Government under the Act on Special Measures Concerning the Handling of Environment Pollution by Radioactive Materials

(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.

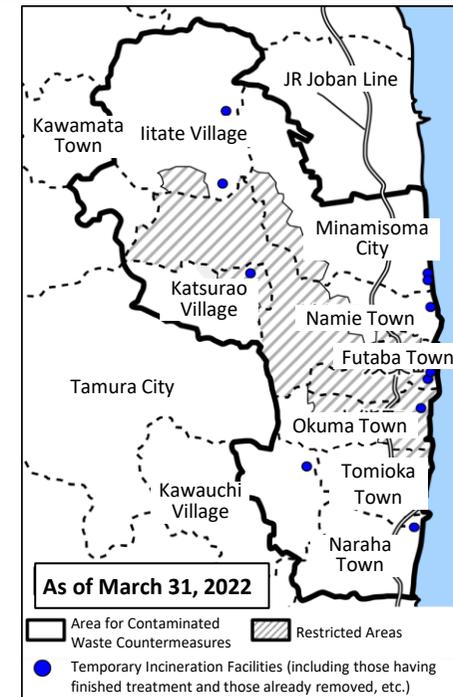
(ii) Designated waste

- 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

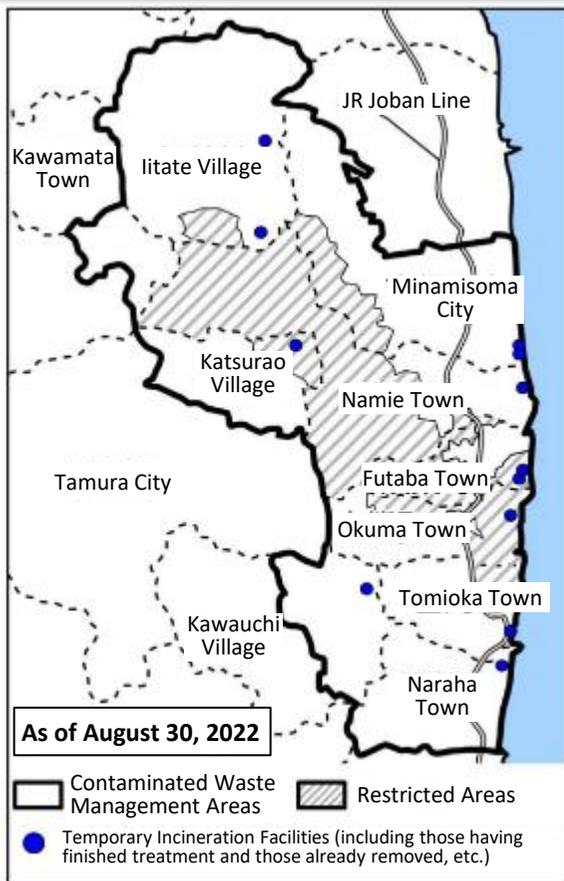


Agricultural and forestry by-products (rice straw)

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

Waste

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

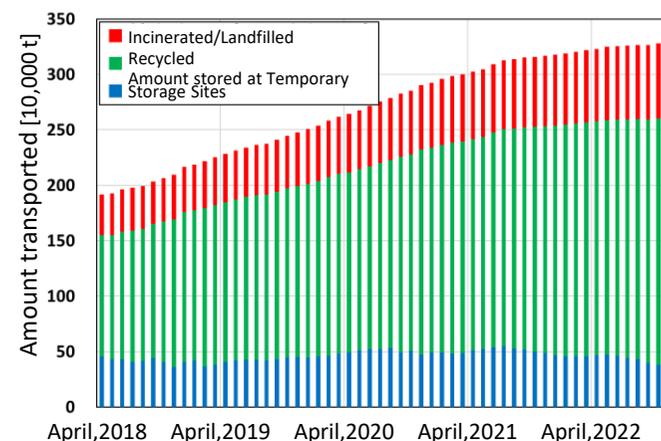


Temporary Incineration Facility in Okuma Town (December 2017)

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 2022, a total of approx. 3.29 million tons of waste had been transported to Temporary Storage Sites (of which, approx. 560,000 tons were incinerated, approx. 2,230,000 tons were recycled, and approx. 220,000 tons were landfilled).



Amount of Waste within the Management Areas having been transported from designated areas to Temporary Storage Sites

[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.

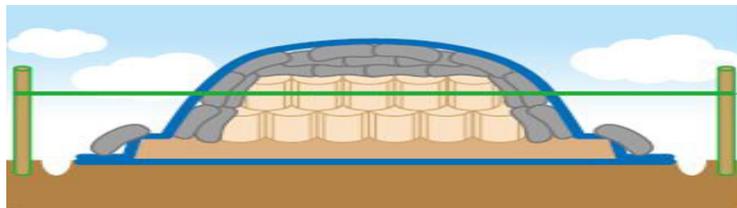
Ensuring Safety for Temporary Storage of Designated Waste

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



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.

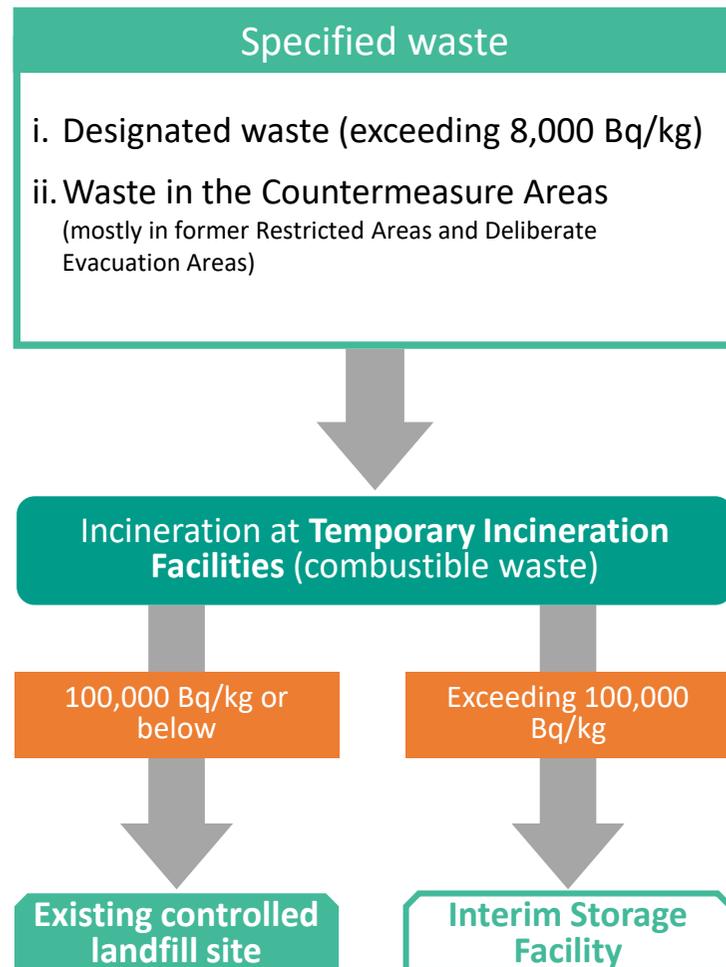


Staff of the Regional Environmental Office checking the storage status

Waste

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.



Volume reduction project

Sewage sludge	<p>Terminal treatment plant in Horikawa Town, Fukushima City</p> <p>Drying treatment of dehydrated sludge, etc. was completed at the end of October 2014 and the plant was demolished at the end of March 2016.</p> 	<p>Fukushima Prefecture Central Purification Center (Koriyama City)</p> <p>Incineration of dehydrated sludge, etc. was completed in March 2014, and Fukushima Prefecture took over the work and incinerated waste with radioactivity concentrations of 8,000 Bq/kg or below and the incineration work was completed at the end of May 2016.</p> 
	<p>Samegawa Village</p> <p>Incineration of agricultural and forestry waste was completed at the end of July 2015.</p>	<p>Warabidaira District, Iitate Village</p> <p>Volume reduction of contaminated waste generated in Iitate Village and surrounding five municipalities; A Temporary Incineration Facility started operation in January 2016 and wide-area waste treatment was completed in November 2018.</p>
Agricultural and forestry waste, etc.	<p>Switching stations (Tamura City and Kawauchi Village)</p> <p>The volume reduction project of agricultural and forestry waste that was conducted in the area extending over Tamura City and Kawauchi Village in Fukushima Prefecture was completed in February 2021.</p> 	<p>Adachi District (Nihonmatsu City)</p> <p>The volume reduction project of agricultural and forestry waste that was conducted in Nihonmatsu City in Fukushima Prefecture was completed in February 2022.</p>

Waste

Landfill Disposal of Specified Waste at Controlled Landfill Site

- In the specified waste landfill project, transport of specified waste was commenced on November 17, 2017.
- Up until now, a total of approx. 260,000 bags of specified waste, which accounts for nearly 80% of the target amount (approx. 300,000 bags) was carried in (as of the end of December 2022)
- **Results of the monitoring conducted before and after the commencement of transport** show **no abnormal increases** in air dose rates.

Developments

- Dec. 14, 2013: **The national government asked** Fukushima Prefecture, Tomioka Town, and Naraha Town **for consent to accept** the construction of the site.
- Dec. 4, 2015: **Fukushima Prefecture, Tomioka Town, and Naraha Town** expressed their **intention to approve the program**.
- Apr. 18, 2016: The Controlled Landfill Site (former Fukushima Eco Tech Clean Center) was **nationalized**.
- Jun. 27, 2016: The national government **concluded a safety agreement** with Fukushima Prefecture and the two municipalities.
- **Nov. 17, 2017: Transport of waste was commenced.**
- Aug. 24, 2018: Reprun Fukushima, a specified waste landfill information center, was opened.
- Mar. 20, 2019: Cement solidification facility commenced operation.

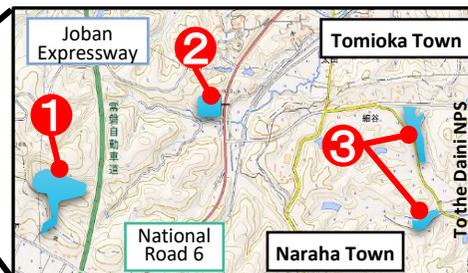
Waste to be landfilled and period of transport

- **Waste from the countermeasure area** (not exceeding 100,000 Bq/kg): Approx. 6 years
- **Designated waste** in Fukushima Prefecture (not exceeding 100,000 Bq/kg): Approx. 6 years
- **Household garbage** from 8 Futaba-gun municipalities: Approx. 10 years. Waste with radioactivity concentration exceeding 100,000 Bq/kg is transported to the ISF.



Related facilities

- 1 Specified Waste Landfill Facility
- 2 Reprun Fukushima, a specified waste landfill information center
- 3 Cement solidification facility



1. Reception/Storage → 2. Solidification → 3. Curing → 4. Storage/Transport
Prepared by the Ministry of the Environment

Status of the Five Prefectures concerning Designated Waste

Miyagi Prefecture

[Municipal mayors' conference]

1st to 4th: Oct. 2012 to Nov. 2013

5th: Jan. 20, 2014

→ Three candidate sites for detailed survey were presented (Fukayamadake, Kurihara City; Shimohara, Taiwa-cho; Tashirodake, Kami Town).

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

→ The prefectural governor announced the acceptance of a detailed survey as 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 Kami Town (also suspended in 2015).

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

Oct. to Nov. 2015 (twice): Opinion exchange with Kami Town with the participation of experts

9th: Mar. 19, 2016

→ Results of the remeasurement 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.

11th (held by the prefecture): Nov. 3, 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 Kurihara City and Tome City, and it was decided to have discussions again.

13th (held by the prefecture): Jun. 18, 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 3rd: Apr. 2013 to Aug. 2013

4th: Dec. 24, 2013

→ Selection method was determined.

Jul. 30, 2014

→ One candidate site for detailed survey was presented (Terashimairi, Shioya Town).

5th and 6th: Jul. 2014 to Nov. 2014

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

Oct. 14, 2015:

Survey of the effects of the heavy rain in Terashimairi, Shioya Town

Dec. 7, 2015:

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

7th: May 23, 2016

→ Remeasurement for designated waste was decided.

8th: Oct. 17, 2016

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

Mar. 30, 2017: Results of the confirmation of intentions of people temporarily storing waste by themselves were released.

Jul. 10, 2017: Meeting of mayors of municipalities concerning measures to ease burdens of farm households storing waste by themselves (i)
→ Draft of policy for measures to ease burdens of farm households storing waste by themselves were presented.

Nov. 26, 2018: Meeting of mayors of municipalities (ii)

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

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

Jun. 26, 2020: Meeting of mayors of municipalities (iii)

→ Participants confirmed future directions.

Jun. 2, 2021: The Ministry of the Environment asked Nasushiobara City to cooperate in provisional centralized collection of waste (Oct. 22, 2021: Designated waste having been stored by individual farm households started to be transported in the city.)

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

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 removal of the designation.

Jul. 22, 2016:

Designation was removed 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. 1, 2013

3rd: Dec. 26, 2016

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