

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

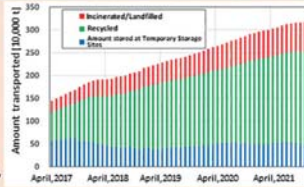


Temporary Incineration Facility in Okuma Town (December 2017)

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 2021, a total of approx. 3.17 million tons of waste had been transported to Temporary Storage Sites (of which, approx. 540,000 tons were incinerated, approx. 2,040,000 tons were recycled, and approx. 200,000 tons were landfilled).



[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]

Now treating disaster waste, etc.	Namie Town, Okuma Town and Futaba Town
Disposal of disaster waste completed	Kawachi Village, Iitate Village (Komiya district), Tomioka Town, Minamisoma City, Katsurao Village, Iitate Village (Waraidaira district), and Naraha Town



Demolition of a damaged house, etc.

- *Tamura City and Kawamata Town use existing waste disposal facilities for disposing of disaster waste.
- *Futaba Town has two Temporary Incineration Facilities.

Prepared by the Ministry of the Environment

Waste within the Management Areas in Fukushima Prefecture has been disposed of based on the Plan on Waste within the Management Areas, 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 2021, a total of approx. 3.17 million tons had already been transported. Transported waste is recycled as much as possible.

It was decided to incinerate inflammable waste to reduce volume at Temporary Incineration Facilities constructed at 11 locations in nine municipalities. As of the end of November 2021, 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, 2022

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



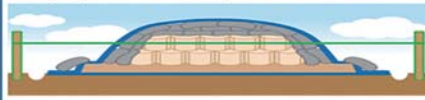
Cover them up with soil to shield radiation



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

Designated waste includes ash left after incinerating waste contaminated with radioactive materials, sludge generated through sewage treatment, soil generated at water treatment plants to supply tap water (p.40 of Vol. 2, "Waterworks System"), agricultural and forestry waste such as rice straw and pasture grass, etc.

As of the end of September 2021, there was a total of over 380,000 tons of designated waste in 10 prefectures, including Tokyo Metropolis. Such 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.

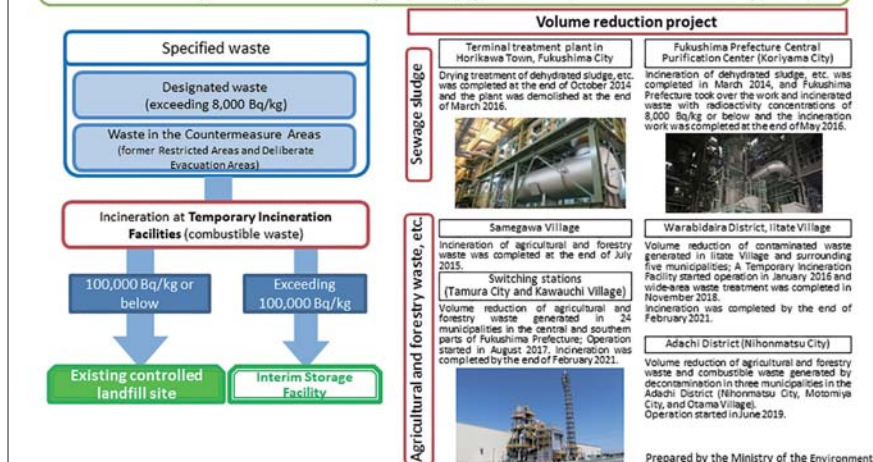
The waste is to be covered with impermeable sheets, etc. to prevent infiltration of rainwater and measures to prevent scattering and runoff of the waste are being taken in line with the guidelines and the Act on Special Measures Concerning the Handling of Environment Pollution by Radioactive Materials. 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, 2022

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.

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- In the specified waste landfill project, transport of specified waste was commenced on November 17, 2017.
- Up until now, a total of **209,112 bags of specified waste was carried in** (as of the end of December 2021).
- **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.

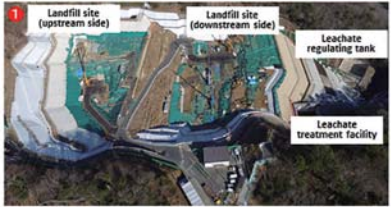
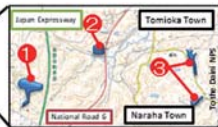
Waste to be landfilled and period of transport

- Waste in the counter measure 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

- (i) Specified Waste Landfill Facility
- (ii) Reprun Fukushima, a specified waste landfill information center
- (iii) Cement solidification facility



Prepared by the Ministry of the Environment

Waste with radioactivity concentrations not exceeding 100,000 Bq/kg generated in Fukushima Prefecture is to be disposed of promptly at the existing controlled landfill site.

In order to implement this project, 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 transport of waste to the facility was commenced in November 2017. 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.

In order to steadily facilitate disposal of waste contaminated with 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, 2022

Status of the Five Prefectures concerning Designated Waste

Miyagi Prefecture	Tochigi Prefecture	Chiba Prefecture	Ibaraki Prefecture	Gunma Prefecture
<p>[Municipal mayors' conference]</p> <p>1st to 4th: Oct. 2012 to Nov. 2013</p> <p>5th: Jan. 30, 2014 → Three candidate sites for detailed survey were presented (Fukayamadake, Kurihara City, Shimohara, Taihachō, Tashiro-dake, Kami Town).</p> <p>7th (held by the prefecture): Aug. 4, 2014 → The prefectural government announced the acceptance of a detailed survey as a consensus of all municipal mayors.</p> <p>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).</p> <p>[Apr. 5, May 29, and Oct 13, 2015: Forestry targeting prefectural residents</p> <p>Oct. to Nov. 2015 (twice): Opinion exchange with Kami Town with the participation of experts</p> <p>9th: Mar. 19, 2016 → Results of the re-measurement for designated waste and approaches of the Ministry of the Environment were explained.</p> <p>Apr. 15, 2016: The prefecture requested the suspension of an on-site survey until certain prefecture policy is decided.</p> <p>11th (held by the prefecture): Nov. 3, 2016 → Results of the measurement for waste other than designated waste were released. The prefecture presented to draft policy on disposal of waste with radioactivity concentrations not exceeding 8,000 Bq/kg (excluding designated waste).</p> <p>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.</p> <p>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.</p> <p>14th (held by the prefecture): Jul. 15, 2017 → Agreement was reached on the draft disposal policy presented at the previous meeting.</p> <p>Test incineration was completed in four districts, Ishinomaki, Sennan, Kurokawa and Osaki. → Ishinomaki: Full-fledged incineration was completed; Kurokawa: Application to farmstead is planned; Sennan and Osaki: Full-fledged incineration is underway.</p>	<p>[Municipal mayors' conference]</p> <p>1st to 3rd: Apr. 2010 to Aug. 2013</p> <p>Apr. 2, 2013 → Selection method was determined.</p> <p>Jul. 30, 2014 → One candidate site for detailed survey was presented (Terashimai, Shioya Town).</p> <p>5th and 6th: Jul. 2014 to Nov. 2014 May 14, Jun. 12, and Sep. 13, 2015: Forum targeting prefectural residents</p> <p>Oct. 14, 2015: Survey of the effects of the heavy rain in Terashimai, Shioya Town</p> <p>Dec. 3, 2015: The mayor of Shioya Town declared the surrender of the designation as a candidate site for detailed survey.</p> <p>7th: May 23, 2016 → Re-measurement for designated waste was decided.</p> <p>8th: Oct. 17, 2016 → Results of the re-measurement were released and future directions were presented.</p> <p>Mar. 30, 2017: Results of the confirmation of intentions of people temporarily storing waste by themselves were released.</p> <p>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 was presented.</p> <p>Nov. 26, 2018: Meeting of mayors of municipalities (II) → Agreement was reached on efforts to muster agreement of municipalities, including those on re-measurement.</p> <p>Mar. 15, 2019: Results of the re-measurement was released.</p> <p>Jun. 26, 2020: Meeting of mayors of municipalities (III) → Participants confirmed future directions.</p> <p>Jun. 2, 2021: The Ministry of the Environment asked Nasushiobara City to cooperate in provisional centralized collection of waste (Oct. 12, 2021). Designated waste having been stored by individual farm households started to be transported in the city.</p> <p>Efforts are to be made continuously to seek agreement 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.</p>	<p>[Municipal mayors' conference]</p> <p>1st to 3rd: Apr. 2013 to Jan. 2014</p> <p>4th: Apr. 17, 2014 → Selection method was determined.</p> <p>Apr. 24, 2015 → One candidate site for detailed survey was presented.</p> <p>(Part of the premises of TEPCO's Chiba Thermal Power Station (Chuo Ward, Chiba City))</p> <p>May 20 and Jun. 2, 2015: Chiba City Assembly Plenary Meeting</p> <p>Jun. 8 and Jun. 10, 2015: Chiba City Assembly and the city mayor requested the fresh discussions.</p> <p>Jun. 29, Jul. 7, 13 and 20, and Aug. 7, 2015: Explanations were given to community organization leaders and residents of Chiba City.</p> <p>Dec. 14, 2015: Response to the request for fresh discussions was made.</p> <p>Jun. 28, 2016: Chiba City requested for removal of the designation.</p> <p>Jul. 22, 2016: Designation was removed for designated waste in Chiba City.</p> <p>Efforts are to be made continuously to seek agreement on detailed surveys.</p>	<p>[Municipal mayors' conference]</p> <p>1st: Apr. 12, 2013 2nd: Jun. 27, 2013 3rd: Dec. 25, 2013 4th: Jan. 28, 2015</p> <p>[Meeting of mayors of municipalities where waste is temporarily stored]</p> <p>1st: Apr. 6, 2015 2nd: Feb. 4, 2016</p> <p>→ The policy to continue on-site storage and promote staged disposal was determined.</p> <p>Mar. 31, 2017: Re-measurement for designated waste, etc. in the prefecture was conducted and the results were released.</p>	<p>[Municipal mayors' conference]</p> <p>1st: Apr. 19, 2013 2nd: Jul. 1, 2013 3rd: Dec. 26, 2016</p> <p>→ The policy to continue on-site storage and promote staged disposal was determined.</p>

Prepared by the Ministry of the Environment

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. They ascertain the current status through the measurement of radioactivity concentrations, based on discussions at municipal mayors' conferences.

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 presented selected candidate sites in January 2014, July 2014 and April 2015, respectively. 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 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 December 2021, full-fledged incineration was completed in the Ishinomaki district and was underway in the Sennan and Osaki districts. In the Kurokawa district, test incineration was completed, and thereafter, treatment of other waste was completed through plowing-in and composting in October 2021. In the Sennan district, full-fledged incineration was suspended to prioritize disposal of waste generated by the 2019 East Japan Typhoon but was resumed in May 2021.

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 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 municipalities. In June 2021, the Ministry of the Environment asked Nasushiobara City to cooperate in provisional centralized collection of designated waste having been stored by individual farm households. In October 2021, the work to transport designated waste from farm households to the centralized collection site was commenced in the city.

As for Chiba Prefecture, it is also making efforts to obtain understanding of 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.

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