

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

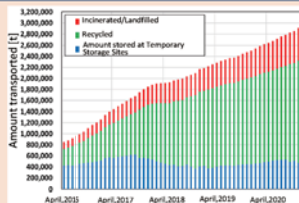


Temporary Incineration Facility in Okuma Town (December 2017)

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 December 2020, a total of approx. 2.93 million tons of waste had been transported to Temporary Storage Sites (of which, approx. 510,000 tons were incinerated, approx. 1,840,000 tons were recycled, and approx. 170,000 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]

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



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 December 2020, a total of approx. 2.93 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 December 2020, six such facilities were in operation and waste is being steadily incinerated.

Included in this reference material on February 28, 2018

Updated on March 31, 2021

## Ensuring Safety for Temporary Storage of Designated Waste

### Temporary storage work (in the case of agricultural by-products)



Elevate a certain parcel of land by adding soil



Put waste in tough bags and surround those bags with sandbags



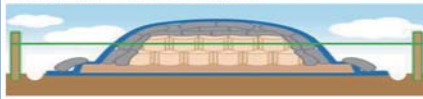
Cover them up with soil to shield radiation



Cover the whole area with an impermeable sheet

### Structure of a Temporary Storage Site (in the case of agricultural by-products)

- 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 that remains at purification plants to supply tap water (p.38 of Vol. 2, "Waterworks System"), agricultural by-products such as rice straw and pasture grass, etc.

As of the end of September 2020, there was a total of over 320,000 tons of designated waste in 10 prefectures, including Tokyo Metropolis. Such waste is temporarily being stored at incineration facilities, purification plants, sewage treatment facilities, farmland, etc., where it was generated, until the national government establishes a proper disposal system.

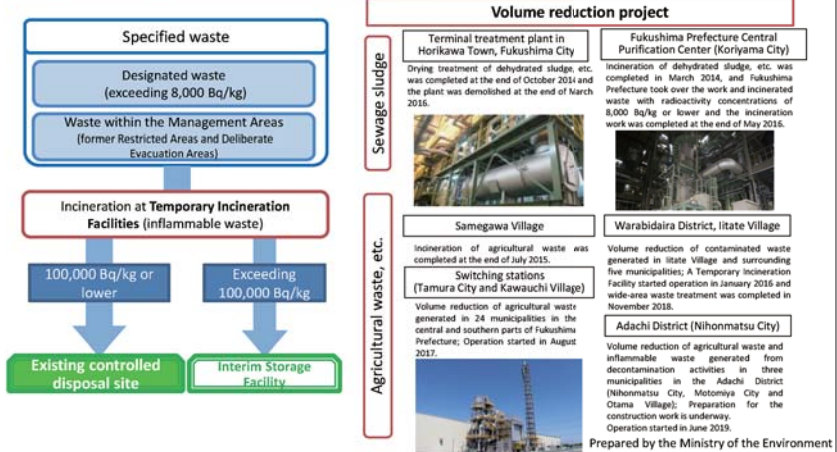
The waste is to be covered with impermeable sheets, etc. to prevent infiltration of rainwater and measures to prevent scattering and runoff of the waste are being taken in line with the guidelines and the Act on Special Measures Concerning the Handling of Environment Pollution by Radioactive Materials. 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, 2021

## 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 lower is to be transported to the existing controlled disposal 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 concentrations exceeding 8,000 Bq/kg but 100,000 Bq/kg or lower is to be transported to the existing controlled disposal site, while designated waste with radioactivity concentrations exceeding 100,000 Bq/kg is to be transported to the Interim Storage Facility.

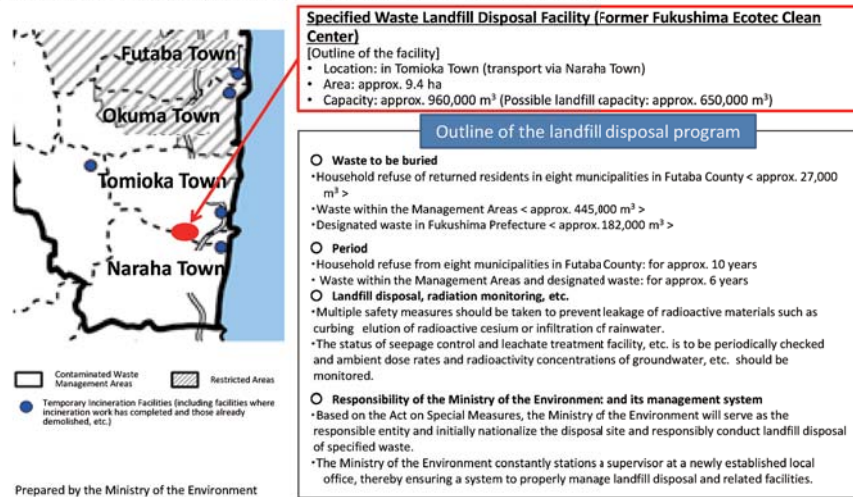
Additionally, designated waste is incinerated, dried or otherwise handled to reduce volume and stabilize their properties in Fukushima Prefecture.

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## Landfill Disposal Plan of Specified Waste Utilizing the Controlled Disposal Site

In order for reconstruction of eight municipalities in Futaba County and ultimately the entirety of Fukushima Prefecture, the issue of waste contaminated with radioactive materials needs to be solved as early as possible. It is planned to safely and promptly bury waste with radioactivity concentrations not exceeding 100,000 Bq/kg at the existing controlled disposal site, former Fukushima Ecotec Clean Center. Transport of specified waste was commenced in November 2017.



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

In order to implement this program, 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 program. The national government nationalized the existing controlled disposal 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 facility, 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 program with safety as the top priority and to build a stronger relationship of trust with local residents.

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Waste 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. 20, 2014</p> <p>→ Three candidate sites for detailed survey were presented (Fukuyamadake, Kurihara City; Shimohara, Taiwa-cho; Tashirodake, Kami Town).</p> <p>7th (held by the prefecture): Aug. 4, 2014</p> <p>→ The prefectural governor 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: Forum 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</p> <p>→ Results of the remeasurement 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 prefectural policy is decided.</p> <p>11th (held by the prefecture): Nov. 3, 2016</p> <p>→ 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 (including designated waste).</p> <p>12th (held by the prefecture): Dec. 27, 2016</p> <p>→ 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</p> <p>→ 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</p> <p>→ 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 farmland is planned. Sennan and Osaki: Full-fledged incineration is underway.</p>	<p>[Municipal mayors' conference]</p> <p>1st to 3rd: Apr. 2013 to Aug. 2013</p> <p>4th: Dec. 24, 2013</p> <p>→ Selection method was determined.</p> <p>Jul. 30, 2014</p> <p>→ One candidate site for detailed survey was presented (Terashimai, Shiyo Town).</p> <p>5th and 6th: Jul. 2014 to Nov. 2014</p> <p>May 14, Jun. 22, and Sep. 13, 2015: Forum targeting prefectural residents</p> <p>Oct. 14, 2015: Survey of the effects of the heavy rain in Terashimai, Shiyo Town</p> <p>Dec. 7, 2015: The mayor of Shiyo Town declared the surrender of the designation as a candidate site for detailed survey.</p> <p>7th: May 23, 2016</p> <p>→ Remeasurement for designated waste was decided.</p> <p>8th: Oct. 17, 2016</p> <p>→ Results of the remeasurement 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)</p> <p>→ Draft of policy for measures to ease burdens of farm households storing waste by themselves were presented.</p> <p>Nov. 26, 2018: Meeting of mayors of municipalities (ii)</p> <p>→ Agreement was reached on efforts to muster opinions of municipalities, including those on remeasurement.</p> <p>Mar. 19, 2019: Results of the remeasurement was released.</p> <p>Jun. 26, 2020: Meeting of mayors of municipalities (iii)</p> <p>→ Participants confirmed future directions.</p> <p>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.</p>	<p>[Municipal mayors' conference]</p> <p>1st to 3rd: Apr. 2013 to Jan. 2014</p> <p>4th: Apr. 17, 2014</p> <p>→ Selection method was determined.</p> <p>Apr. 24, 2015</p> <p>→ 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 Primary Meeting</p> <p>Jun. 8 and Jun. 30, 2015: Chiba City Assembly and the city mayor requested 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>[Meeting of mayors of municipalities where waste is temporarily stored]</p> <p>1st: Apr. 12, 2013</p> <p>2nd: Apr. 27, 2013</p> <p>3rd: Dec. 25, 2013</p> <p>4th: Jan. 28, 2015</p> <p>→ The policy to continue on-site storage and promote staged disposal was determined.</p> <p>1st: Apr. 6, 2015</p> <p>2nd: Feb. 4, 2016</p> <p>Mar. 31, 2017: Remeasurement 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</p> <p>2nd: Jul. 1, 2013</p> <p>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 2020, full-fledged incineration was completed in the Ishinomaki district and was underway in the Sennan and Osaki districts. In the Sennan district, full-fledged incineration is suspended to prioritize disposal of waste generated by the 2019 East Japan Typhoon.

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.

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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