

# **Collecting Garbage and Recyclable Resources**

Garbage and recyclables generated from households are systematically collected throughout Yokohama.

In order to promote reduction and recycling of garbage and to treat the garbage appropriately, the understanding and cooperation of Yokohama's citizens ensure meticulous separation of recyclables, proper disposal, and maintenance of clean local collection points. We encourage everyone to follow the rules for reducing garbage and to keep the city clean and beautiful.

## Separation and disposal of garbage and recyclables/flow of recycling procedures

■ To ensure efficient resource collection, 15 categories in total are collected. Garbage separation is divided into ten categories.					
Classification of separation	Frequency of collection	Major items	Disposal procedure	Flow of recycling procedures	
Burnable garbage	Twice a week	Kitchen waste  Dirty and malodorous papers  Plastic items (less than 50 cm long)	Place in transparent or semitransparent bags.	A portion of the ash generated during incineration is reused in the following ways. (Example)	
Dry cell batteries	Twice a week	Manganese batteries  Alkaline batteries lithium primary batteries	Place in transparent or semitransparent bags.	Stockyard (Shimmeidai Landfill) Outsourcing recyclable resource handling  Recycling Companies  Recycling Companies  Companies  Construction Construc	
Spray	Twice a week	Spray cans	Place in transparent or semitransparent bags.	Private separation and treatment facilities  Recycling companies  Recycling companies Selling  Recycling companies Steel cans: recycled and used for construction as metal materials.	
Non-burnable garbage	Twice a week	Glass and Fluorescent lights ceramics, etc. and light bulbs	Place items in the box obtained at the purchase or newspapers and describe the contents using words/phrases "glass" or" fluorescent light."	Recycling companies  Private separation and treatment facilities  (Broken bags, foreign outsourcing (Fluorescent lights substance removal, etc.) recyclable and light bulbs) are recycled as the raw materials of each.  Glass and ceramics are used as civil engineering materials such as for roadbed materials etc.  Fluorescent lights and light bulbs are recycled to glass wool, and aluminum and iron are recycled as the raw materials of each.  Glasswool	
Plastic containers/ packaging	Once a week	Bottles Trays Plastic bags/food wrap  All items with the "plastic containers/packaging" logo	Place in transparent or semitransparent bags.	Private intermediate treatment facilities (removing foreign substances and packing)  Outsourcing recyclable resource handling (paid by municipality *3)  Palette  Containers/packaging are recycled as raw materials for plastic items such as artificial wooden materials and palettes, reducing agents in blast furnaces, chemical raw materials for coke furnaces, and raw materials for plastic items such as artificial wooden materials and palettes, reducing agents in blast furnaces, chemical raw materials for coke furnaces, and raw materials for plastic items such as artificial wooden materials and palettes, reducing agents in blast furnaces, chemical raw materials for plastic items such as artificial wooden materials and palettes, reducing agents in blast furnaces, and raw materials for plastic items such as artificial wooden materials and palettes, reducing agents in blast furnaces, and raw materials for plastic items such as artificial wooden materials and palettes, reducing agents in blast furnaces, and raw materials for plastic items such as artificial wooden materials and palettes, reducing agents in blast furnaces, and raw materials for plastic items such as artificial wooden materials for plastic items such as artificial wooden materials and palettes, reducing agents in blast furnaces, and raw materials for plastic items such as artificial wooden materials and palettes, reducing agents in blast furnaces, chemical raw materials for plastic items such as artificial wooden materials and palettes, reducing agents in blast furnaces, and are plastic items such as artificial wooden materials for plastic items such as artificial wooden materials for plastic items such as artificial wooden materials	
Cans, glass bottles, and PET bottles	Once a week	Cans, glass bottles, and PET bottles  *Cans and glass bottles of food and beverages and plastic PET bottles with the PET bottles logo ♠ for/or beverages, sake, mirin cooking wine or soy sauce.	Place in transparent or semitransparent bags.	Resource Separation Facilities Separation Fa	

- \*2 Landfill sites ......Minami-Honmoku Block #5 Final Disposal Site
- \*3 Costs paid by municipalities......Costs incurred for recycling of plastics are covered by the recycling companies, but because small businesses are exempt from creating new products from recycled materials, this portion is covered by the municipalities.



\*4 Resource Separation facilities....Resource Separation Centers in Kanazawa, Midori, and Totsuka and the Tsurumi Recycling Center

Classi	ification of iration	Frequency of collection	Major items	Disposal procedure	Flow of recycling procedures	
21 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Small metal items	Once a week	Metal items less than 30 cm long	Dispose of them to local collection points without semitransparent bags. Wrap sharp objects such as blades in a thick paper and label it "blade."	Stockyard (Resource Separation Facilities and the Shimmeidai Landfill)  Selling  Recycling companies  Recycling companies  Construction.  The materials are recycled to produce metal products and used for construction.  Construction materials	
Used paper	Paper bags Cardboard Magazines and other paper Newspapers	Local community collection of recyclables (see P 16). (Note that frequency of pickup depends on the area).	Newspapers and inserts  Other paper: Wrapping and newspaper inserts, etc.  Magazines: Weekly magazines and books, etc.  Cardboard  Paper cartons	Fold into four and bundle with a paper string in a criss-cross fashion.  Magazines: Bundle with a paper string in a criss-cross Fashion Other paper: Put the products in a bag and bundle with a paper string. Fold and bundle with a paper string in a criss-cross fashion. Rinse with water, cut open, let dry, and then tie up with an appropriate length of string.	The items from each category are recycled into the following products  Paper of newspapers: newspapers and weekly magazines  Magazines and other paper: cardboard boxes, picture books, etc. Paper cartons: toilet paper  Corrugated cardboard: corrugated cardboard boxes and paper tubes	
140 0 000	Used clotu		Used cloth	Place in transparent or semitransparent bags. Do not put out on rainy days.	Recycling companies  Reused as used clothes Reused as rags for wiping oil off machinery Broken down into raw cotton material and reused for cushion materials and heat insulation	
	Oversized garbage	Paid system *Details are given below	Metal items of 30 cm or longer, or non-metal items of 50 cm or longer	Pay a handling fee and place the collection seal sticker on the item	Burnables  Incineration plant *1  Down-filled futons  Selling  Recycling companies  Stockyard (within plants)  Non-burnables  Landfill site *2  Down-filled futons can be reused as core material for new products.  Metal products are reused as raw materials for construction.  Furniture and other articles that can be reused are provided to citizens through events and similar venues.	

## Disposing of oversized garbage

Oversized garbage is collected for a fee, and prior applications can be made by telephone, online, or through chat or LINE.

Oversized Garbage Reception Center Reception Hours: Mon-Sat (except New Year) 8:30 to 17:00

When calling from a general subscription landline phone (Navi dial)	When using a flat-rate system such as a mobile phone or IP phone or using a call charge discount service	
0570-200-530	045-330-3953	

#### Internet https://www.sodai.city.yokohama.lg.jp

• Those with language or hearing problems may apply by FAX (only for people with language or hearing problems).

**AV** 045-550-3599

We also carry items out for you. Fees may be reduced, for example, if you have a disability certificate. Please inquire at the reception center for details or visit the web page.

## 2

## Disposal of air conditioners, TVs, electric refrigerators, electric freezers, washing machines, dryers etc.

These products are collected by home appliance retailers and recycled by home electronics manufacturers, etc. in accordance with the Home Appliance Recycling Act. Please ask the shop where you purchased the product in the past or at the shop where you are buying a replacement.

If the store where you purchased the item no longer exists or is too far away, you can request the **Yokohama Home Appliance Recycling Promotion Council** to come and get it.

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Items that are not collected by the City of Yokohama, and collection service for animal carcasses



## Items that are not collected by the City of Yokohama

#### Single disposal of large amount garbage

Please request disposal from a licensed general waste collection and transportation business. (Fees apply).

#### Items that are difficult to handle

Please consult with the place where you purchased the item or your local Resources & Waste Recycling Bureau Office concerning motorcycles, tires, car batteries, fire extinguishers, safes, pianos, gas cylinders, kerosene, paint or medical items.

Construction waste

**Business-related garbage** 

The list of vendors recognized by the City of Yokohama is shown on our website.

http://www.city.yokohama.lg.jp/shigen/sub-jigyo/jigyo/kyoka/

#### Garbage generated by fires or disasters

If you bring your garbage generated by a fire or disaster directly to the center, your fee may be waived in some cases.

Please contact your local Resources & Waste Recycling Bureau Office.

Personal computer for home use

Please contact the manufacturer or PC3R Promotion Association directly (http://www.pc3r.jp/) for disposal of your computer and for details on the corresponding handling fee. Small electronic appliances are also accepted. Peripheral equipment such as printers and scanners are collected as oversized garbage or burnable garbage depending on their size.



#### Collection service for animal carcasses

- Please contact your local Resources & Waste Recycling Bureau Office to apply for collection.
  - 1. If you find a carcass of which the owner is unknown, no fee is required.
  - 2. If you wish to cremate your pet together with those of others (on-site collection), ¥6,500 fee is required. (The ashes are not returned. Only available for pets less than 50kg in weight.)
- If you would like to take home the ashes, have a separate cremation, or bring your pet directly to the site of joint cremation, please make arrangements with Totsuka Funeral Hall (fees apply).

## Printed materials and tools on garbage separation

## The City of Yokohama garbage sorting app

It has various functions such as "lo's Garbage Sorting Guide," where lo teaches you how to put out your garbage, a classification dictionary called "Mictionary," other useful information for sorting your garbage, and calendar settings for collection days. (Also available in English and Chinese)



#### LINE

The official City of Yokohama LINE account has guides for sorting garbage and can be used to apply for oversized garbage disposal.

You must add the official City of Yokohama LINE account as a friend in order to use these services.

## Printed materials available to the public

As a means of facilitating appropriate garbage separation in the city, we offer a variety of printed materials for the public.

Separation and Disposal of Garbage and Recyclables (pamphlet)
 Separation and Disposal of Garbage and Recyclables (leaflet)



This pamphlet is a comprehensive overview of how to separate and dispose of garbage, as well as information on separation and collection services. It is given out mainly to people who have recently moved into the area.

This information is available in English, Chinese, Korea, Spanish, Portuguese and Vietnamese.



This leaflet is an overview of how to separate and dispose of garbage.

The inside pages contain a list of how the garbage is separated, as well as space for writing in collection days.

This information is available in English, Chinese, Korean, Spanish, Portuguese, Tagalog, Thai, Vietnamese, French and Nepali.

## Always follow the separations rules!

#### **Legal Obligation**

Citizens and companies are both legally obligated to separate garbage and follow the rules of disposal when putting out garbage for collection.

### Non-separated garbage will not be collected

Garbage bags containing non-separated garbage will have warning stickers attached to them and will not be collected in order to warn violators.



#### Fine (additional charge) system for people who do not follow the separation rules

Yokohama officials will open garbage bags containing non-separated garbage in order to inspect the contents. Citizens and companies who repeatedly ignore the separation instructions will be subject to a fine (additional charge of ¥2,000.)



Violators who still do not carry out separation after these instructions will be issued with a warning to improve their behavior

Violators who still do not carry out separation after this advice will be issued with the demand to improve their behavior

Violators who still do not carry out separation within one year of the demand being issued will be subject to an additional charge (¥2,000)

\*Personal information obtained by an investigation is not used outside of the penalty system.

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## The local community collection of recyclables

Neighborhood associations, children's groups, senior clubs, and PTAs collect used paper, used cloth, metal, and glass bottles recycled at designated sites from cooperating households to pass them along to collection companies as part of community-led efforts. We call this system the "local community collection of recyclables." A majority of the communities we know are committed to reducing the volume of garbage and to recycling everything that is recyclable; most communities express a sense of solidarity with these objectives.

We collect all used paper and used cloth disposed of by households at local collection points via local community collection of recyclables.

\*Please note the fact that business waste generated by companies and stores cannot be collected by our systems.



### Starting a new "local community collection of recyclables" project

Details such as collection items and methods for collecting should be discussed between all concerned parties, including the recyclables collection companies. After that, you will need to go through the registration process.

★For information on the registration process, see the resource group collection website (below), or ask your ward's Resource Recycling Bureau office or Resources and Waste Collection Operation Division.

## Subsidy awarded for the "local community collection of recyclables"

Registered resource collection organizations can receive an incentive corresponding to its collection amount.

The incentive is set at ¥3 per kilogram of recyclables. (FY 2018)



## If you don't know the location of collection points or the day of the week:

The collection points and day of the week vary by area.

To find out, either check the blue sticker at the collection point or ask someone who lives in your area. If you can't find out, contact the Resources and Waste Recycling Bureau Office for your area (see P29).



## Check the description of the local community collection of recyclables on our website

[URL] https://www.city.yokohama.lg.jp/kurashi/sumai-kurashi/gomi-recycle/gomi/shudan/

#### What is "the local community collection of recyclables?

Detailed explanation of local community collection of recyclables system and explanation of the differences with the collection conducted by the administration (agencies that are a part of the City of Yokohama).

### Collection day and area information

Information regarding collection days and areas, making it easier for you to participate in the local community collection of recyclables (the information does not include the names of organizations that do not wish to be published).

### Prohibition on removal of waste and recyclable resources

According to a partial revision to the Yokohama City Ordinance for Recyling/Reduction of Waste and Promotion of Proper Disposal that went into effect on April 1, 2013, the removal of waste and recyclable resources from garbage collection points and other such locations is prohibited. Violation of this ordinance may result in a fine of 200,000 yen or less.

Local citizens may directly deliver all old newspapers, clothes and other recyclables to recyclable collection boxes, Center Recycle locations, etc.





Recyclable collection box Location

Hours

**Items** 

Collected

89 facilities used by citizens such as sport centers, community centers, and ward offices. (as of December 2020).

The respective office hours of each center

Used paper (newspapers, magazines, and other papers and paper cartons) and used cloth

\*Corrugated cardboard cannot be collected.

\*Used cloth is not collected at the Odoriba Community Center.



Center Recycle Location

Accepting NA

days Hours

Items Collected The Resources and Waste Recycling Office of each ward except Midori ward, where the depot is at Nagasakadani Yard.

Monday to Saturday except for December 29 to January 3 every year

9:00 to 16:00

Do not bring in items between the hours of 11:30 and 13:30.

Used paper (newspaper, magazines and other paper, paper cartons, cardboard), used cloth, cans, glass or PET bottles, plastic containers/packaging, small metal items, spray cans, dry cell batteries, burnable garbage

\*Please contact us in advance if you are bringing non-burnable garbage.

\*Small home electronics (see below) are also collected.

Book Donation Location

52 locations in district libraries, certain ward offices and community centers. (as of December, 2020)



Hours

Collected

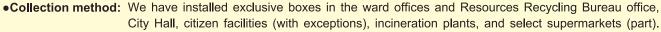
During the opening hours of each facility

Unwanted books (excluding brochures, pamphlets or other journals advertising companies, political activities or religious activities, books deemed unsuitable for children, and books that are remarkably soiled or damaged.)

\*Note that there are cases in which the books submitted to the Reuse Archives may be donated to libraries.

## Small electronics recycling

We collect and recycle small electronics and household appliances.



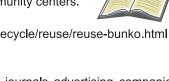
We will also conduct collections during awareness-boosting activities at local events, etc.

•Products collected: Products operated by electricity or battery, less than 30cm in length that can fit in the recovery box slot (30cm x 15cm)

(For example, for digital cameras, mobile telephones, portable music players, computers, etc.)

\*Remove any batteries, light bulbs, fluorescent lamps, etc.

Remove personal information from products before putting them in the collection box.





## Support for putting out garbage



We provide support to elderly people living alone who have difficulty taking out garbage.

Types of Collection	Fureai Collection	Oversized Garbage Collected from Inside Homes	
Details	Garbage is collected directly from the house in question's land or from inside the front door.  *There are cases when a representative will inquire at the door to determine if collection is required or not when garbage has not be put out for a certain period of time.	Garbage collectors will enter the land or the home of the house in question to collect the oversized garbage.  *Oversized garbage that requires the work described below for collection is excluded.  • Items that require dismantling.  • Items that require other furniture to be moved before collection can be made.  • Items that require a system of ropes and pulleys to be collected.	
Application method	Please submit the application form to the Resources Recycling Bureau office.  *The application form can be downloaded from the Resource Recycling Bureau's website.  *We will come to your home, etc. and check if it falls under the category of Fureai collection.		
Eligibility	If you have cohabitants, you are only eligible if one of the following applies to them.  ① People in possession of a Physical Disability Handbook  ② People in possession of a Mental Disability Handbook (Treatment Book)  ③ People in possession of a Mental Disability Social Welfare Insurance Handbook  ④ People certified to received nursing care (or support) through Long Term Care Insurance  ⑤ 65 years or older and unable to take out the garbage	If you have cohabitants and they are elderly or a minor, you are only eligible if one of the following applies to them.  ① People in possession of a Physical Disability Handbook ② People in possession of a Mental Disability Handbook (Treatment Book) ③ People in possession of a Mental Disability Social Welfare Insurance Handbook ④ People certified to received nursing care (or support) through Long Term Care Insurance ⑤ 65 years or older and unable to take out the garbage ⑥ Those permitted by the Director of the Resources Recycling Bureau, such as pregnant women and those who are injured	

#### ■ Hoarding Prevention and Cleanup measures

In order to deal with issues caused by hoarding, we are working on measures based on "regulations for eliminating bad living conditions in Yokohama buildings, and support and measure for preventing the occurrence of such bad living conditions (so-called "garbage house" regulations)."

For solutions to various cases in the city, wards and the bureau collaborate to provide welfare support, and we cooperate with ward offices to offer waste removal support in cases where the person consents to the removal of the accumulated.

#### ■ Support for foreigners living in the community

There are cases when issues have occurred in local communities due to foreign residents not understanding the garbage and recycling rules and systems, or cultural differences related to garbage disposal.

Based on regional characteristics and the situation in the community, we will encourage foreign residents to follow garbage removal rules as part of the overall lifestyle support for foreign residents.



State of a garbage separation lecture in Japanese language school



# Incineration of and Landfills for Garbage

## **Incineration plants**

## At incineration plants



Kanazawa Plant (initiated in April 2001)



Four incineration plants are currently operating in the city of Yokohama, and all of the burnable garbage generated within the city is incinerated both safely and efficiently at these plants.

These plants are used for conducting long-term operations, and garbage is incinerated at high temperatures (800 to 950°C) while controlling dioxin generation. Furthermore, these plants are equipped with several facilities for environmental conservation: the advanced flue gas treatment facilities remove hydrochloric acid, sulfur oxides, nitrogen oxides, smoke dust, and dioxins, and drainage facilities treat the drainage from the plants.

## Garbage pit

The pit temporarily stores the garbage brought in by the collection trucks.



An overview of the **Resources & Waste** Recycling Bureau at the **Incineration Plant** 

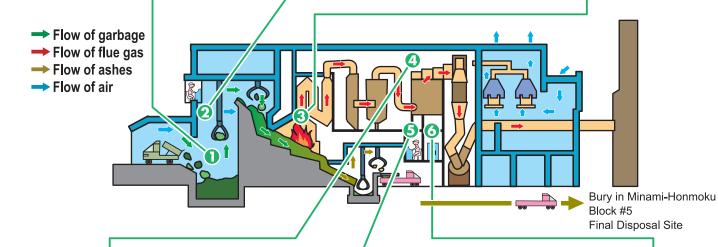
## Crane operation room

Cranes are remotely controlled and are used to transfer garbage into the firing furnace. This process can be automated.

## Firing furnace

The garbage is incinerated in the furnace at high temperatures (800 to 950°C) and is converted to ash.





### Flue gas treatment equipment

This equipment removes hazardous gases and smoke dust from the flue gas.

#### **Central control** room of the firing furnace.

This room houses computers that are used to control and monitor the operation of the firing furnace.



#### Steam turbine power generator

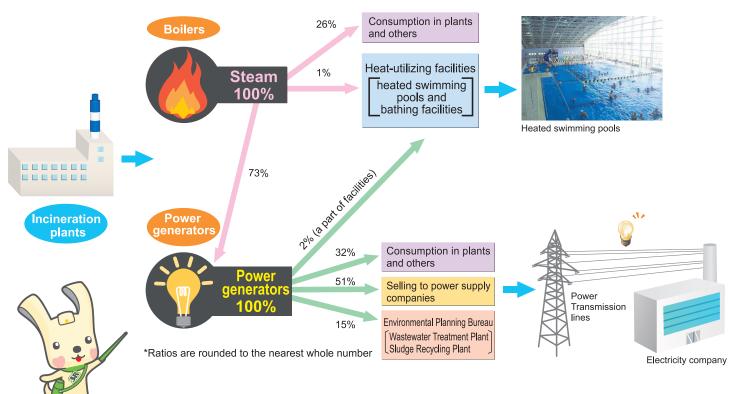
The generator is used to convert the heat energy generated to steam, and the steam is used to generate electric power.



### Utilization of the heat generated from garbage incineration

The heat generated during the incineration process is converted to electric power by steam turbines; the power thus generated is used for operating various plant components such as appliances, air-conditioning, and heat-utilizing facilities (heated swimming pools and welfare centers for the elderly).

In addition to using the electricity generated within the plants, we also supply it to other heat-utilizing facilities, as well as the Northern Area Water Recycling Center II and the Northern and Southern Area Sewerage Centers. We also sell electricity to power companies, and the amount we sold in FY2019 was equivalent to the amount approximately 79,000 households (equivalent to all of Midori ward) use over the course of one year. Income from sale of electricity was 3.4 billion yen.



## a

## Improving incineration efficiency

Incineration plants operate continuously 24 hours a day to dispose of garbage. A combustion improver (such as city gas) is used in the firing furnace when incineration is first started, but because internal temperatures during operation are high between 800°C and 950°C (1,472°F and 1,742°F) the garbage itself burns and serves as fuel, eliminating the need for a combustion improver.

During the combustion of garbage as fuel, however, water content contained therein is the largest cause of decreased combustion efficiency.

Removing water content from kitchen waste, cut branches and other such garbage and drying them in advance can improve combustion efficiency in the plant and boost electric power generation performance. Because increased amounts of power generation aid in the reduction of greenhouse gases during disposal of garbage, which is one of the goals of the Yokohama 3R Dream Plan, we kindly ask for your cooperation in these efforts.



## 11

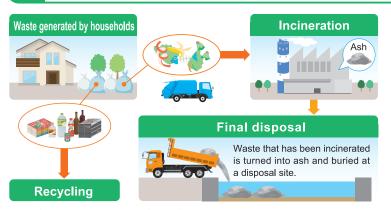
#### **Maintenance of incineration plants**

All of the city's incineration plants are aging, and the newest incineration plant has been in operation for about 20 years.

It can take 10 years to plan and construct an incineration plant, and since maintenance needs to be performed according to schedule, the Hodoagaya plant is currently out of service for renovation.



## 2 Final disposal site



Burnable waste from households is incinerated at the incineration plant. The final remaining incineration ash is buried at the final disposal site. In addition to the Minami-Honmoku Block #5 Final Disposal Site, we are managing wastewater processing from seven final disposal sites that have been filled in.

• Landfill sites also accept some forms of industrial waste

## Minami-Honmoku Block #5 Final Disposal Site and recycling of incinerated ash

Minami-Honmoku Block #5 Final Disposal Site opened in 2017 and is Yokohama City's only general waste final disposal site. If disposal continues at the current pace, it is expected that the capacity will be filled in about 30 years. In order that the disposal site can be used for a long time, we are working on planned recycling of incineration ash along with weight reduction of garbage to use for a long time carefully.



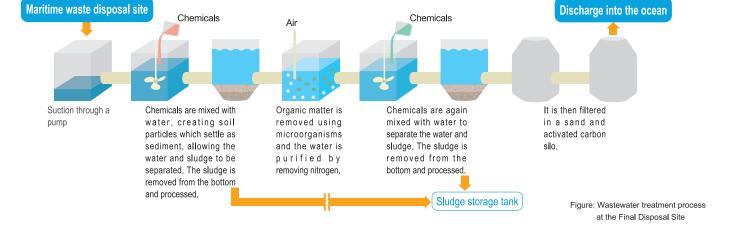


Minami-Honmoku Block #5 Final Disposal Site

Minami-Honmoku Block #5 wastewater treatment facility

## Wastewater treatment at the final disposal site

Wastewater from the final disposal site is treated and purified at the wastewater treatment facility to ensure that the surrounding environment is not affected.



## 3 Environmental survey

In Yokohama, we regularly carry out environmental surveys at incineration plants and final disposal sites to confirm that they are appropriately managed to ensure that citizens may live safely and comfortably.

Through this survey, we are making efforts to ensure environmental protection measures by checking whether the emission standards and environmental standards are met and whether the surrounding environment is affected by items for which dioxin standards and other standards are set. The results are published on web pages etc.

#### Main locations and survey targets

- (1) Exhaust gas, wastewater, incineration ash etc. from the incineration plant
- (2) Water discharged by wastewater processing facilities, air quality, noise and vibrations, groundwater, soil, etc., at final disposal sites



## Treatment of Human Waste

## **Cesspits**

Human waste collected by trucks from cesspits is delivered to the inspection centers and pre-treated, and is then converted into bio gas together with sewage sludge at the Environmental Planning Bureau's treatment facilities. Waste collection from cesspits in Yokohama is handled by the Hokubu office.

The office will endeavor to ensure efficient and hygienic treatment of human waste.

Applications for waste collection from cesspits: Hokubu office



Hokubu Office Mascot

## Septic tanks

Septic tanks are used for decomposition and treatment of the wastewater from flush toilets and residential wastewater (drainage from kitchens and bathrooms) and for generation of safe water; the wastewater is then released into drainage canals.

If you use a flush toilet outside the public sewerage treatment area, please notify in advance and install a septic tank.

### Maintenance and management of septic tanks

For enhancing the function of septic tanks and preventing the pollution and offensive odor of river water, the following maintenance and management measures are required.

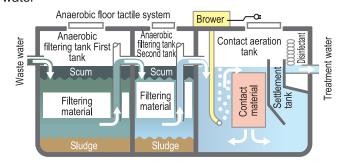
- (1) Maintenance inspection (at least once every three or four months) →Contracting out the inspection work to a septic tank manager is permitted.
- (2) Cleaning (once a year. At least once every six months for all aeration systems)
  - →Cleaning companies licensed by the City of Yokohama
- (3) Legal inspection with regard to water quality

(Inspection conducted between three to eight months after initial use of a septic tank and regular inspection conducted once a year)

→Contact the inspection institute designated by the Governor of Kanagawa Prefecture in the above regard

#### ■ Combined septic tank

Septic tank to treat human waste and residential waste water



## **Public lavatories**



Do Amenity's Toilet Diagnosis Expert Room in front of Shin-Yokohama Station

The bureau manages 77 public lavatories installed at stations and downtown areas.

We conduct daily cleaning so that everyone can use them safely, and aim to maintain clean lavatories.

Many of these public lavatories can also be used by wheelchair users, and the facilities and functions are being expanded for ease of use by anyone, including individuals with small children and those who have undergone an ostomy.

> Please be hygienic in your use of the lavatories in order to keep them clean.

## Measures for installing lavatories during disasters

## Are there a sufficient number of lavatories in the event of a disaster?

#### **Human waste treatment during disasters**

Establishing initiatives for the swift treatment of human waste during disasters is one of our main priorities from a viewpoint of hygiene and cleanliness. As a large number of evacuees collect at regional disaster prevention sites, it is necessary to swiftly and hygienically collect human waste from portable toilets and transport it to water recycling centers.

The Hokubu office is on standby to begin the systematic collection of human waste from the second day following an earthquake or other disaster.



Supporting disaster recovery in the areas affected by the Great Eastern Japan Earthquake.

#### Lavatory Initiatives

Shelters that serve as places of refuge in the case of disaster or emergency are equipped with 5,000 toilet packs and 2 portable vault toilets. In addition, we are working to prepare direct sewage portable toilets. When toilet facilities are still in short supply, suppliers with whom we have concluded agreements will deliver more portable toilets and toilet packs to disaster prevention bases. It is also necessary for households and companies to maintain a stock of toilet packs, and prepare for toilet issues in the event of a disaster.

#### •What are toilet packs?

Toilet packs are kits containing a coagulating agent and a treatment bag. The bag is placed inside a normal household toilet for use, and it can then be disposed of simply and hygienically. Used bags may be disposed of with normal combustible garbage.

#### •Why use toilet packs?

In the case of a disaster, pipes may be broken so toilets cannot be flushed. Toilet packs are useful because they do not need water.

#### •Where are toilet packs sold?

They may be purchased from certain Home Centers.

It is recommended that approximately fifteen packs per person are kept in stock by each household (5 per day X 3 days.)



Place the black treatment bag over the toilet seat for use. Sprinkle the coagulating agent into the bag after use.

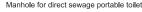
In additional to at least three days' worth of food, drink and toilet packs, each household is recommended to prepare everything the family will require for that period.

#### •What is a direct sewage portable toilet (Hamakko toilet for disasters)?

These toilets can be attached to manholes that connected to buried sewage pipes that are already earthquake-proof.

These toilets, even when sewage water can not be used, are able to flush down waste to sewage pipes with water from a pool, etc.







Direct sewage portable toilet

## Separation and disposal of garbage and resources during a disaster

Separation of garbage and resources at the time of a large-scale disaster such as an earthquake should be performed as described below.

	Definition	Separation and Taking out	Image
Household waste (Evacuation center garbage)	<ul> <li>Garbage which occurs from everyday life the same as in normal times</li> <li>Used toilet packs etc.</li> </ul>	With the same classification rules as usual, please dispose of at places determined for each garbage collection place or regional disaster prevention base.	
Clean-up garbage	Garbage generated by cleaning up in damaged buildings *Damaged furniture, home appliances, etc.	Dispose of in a place other than the collection place for household waste that does not obstruct traffic.	▲ Disaster waste disposed of without separation

<sup>\*</sup>Information such as collection start times and collection methods will be announced by posting on the bulletin board at each regional disaster prevention base, and including websites and SNS of the city and ward.