

The Kawasaki Challenge for the 3Rs

Kawasaki City's Basic Plan for General Waste Disposal -Summary Version-

"Kawasaki Challenge for the 3Rs" is a plan that incorporates the meaning of striving for a recycling-oriented city by having residents join together upon a foundation of the "3Rs" of Reduce (curbing the generation and discharge), Reuse (reusing), and Recycle (recycling) to continuously take up the challenge of reducing their volume of waste, as well as the meaning of a sense of "Enthusiasm" to achieve this objective and a "Watchword" for everyone.

Based on the three pillars of Low-Carbon, Resources Recycling, and Natural Symbiosis, the city has been promoting the pro-environment behavior to the citizens with the catch phrase of [CC Kawasaki Eco-Life"] to realize a sustainable society.



CC Kawasaki's mascot,
Rosie-chan



CC Kawasaki's mascot,
Nomie-chan



The Kawasaki 3R-Promotion Character, "Kavarun"

"Kavarun," a Kawasaki 3R-Promotion character, was born in March 2013.

Kavarun is a fairy who plays an active role in order for the citizens to be familiar with the 3Rs.

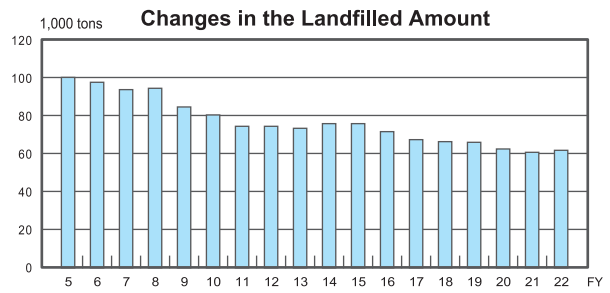
Kavarun expresses the 3Rs with its ears and body.

Kavarun will be actively working in various places in Kawasaki City to promote the 3Rs.

Current State and Challenges of the General Waste Disposal

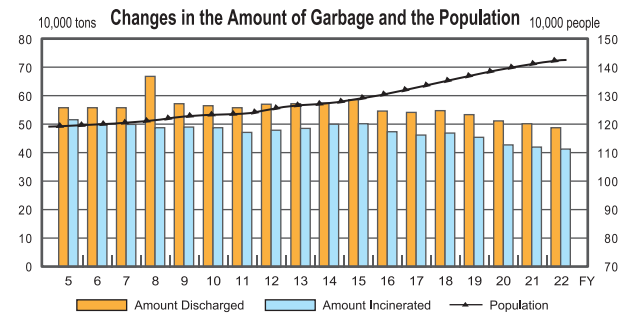
Final Landfill Disposal Sites

While the landfilled amount is decreasing, the Ukishima Waste Landfill and Disposal Site that the city is currently using will be full in about 40 years (2053). The city is in a difficult situation with regard to securing a new landfill disposal site within the city.



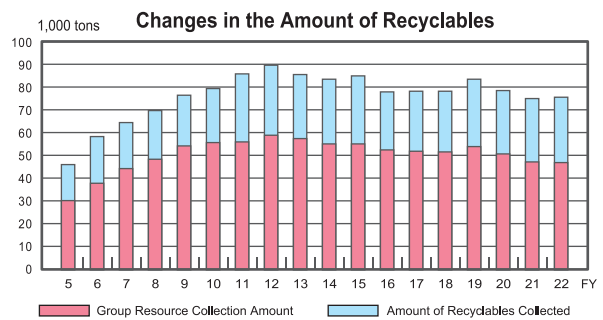
Promotion of Curbing the Waste Generation

While the population has been increasing, the amount of waste discharged by one resident per day has been steadily decreasing due to the results of the 3R-focused initiatives, but we need further initiatives to continuously curb the waste generation.



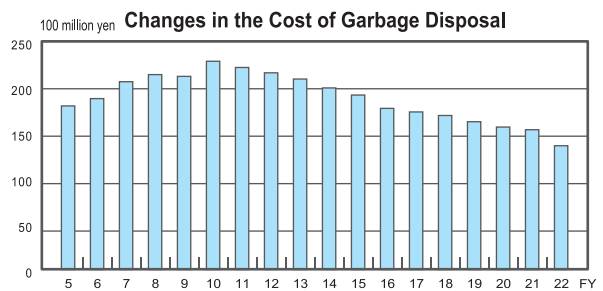
Promotion of Recycling

The decreasing trend in the amount recycled over the past few years was thought to be affected by the decreasing trend in the entire garbage, the long-term economic downturn, etc. Aside from this, the increase in the amount recycled is expected due to the sorted collection of mixed paper implemented in the entire city and the sorted collection of plastic containers and packaging implemented in the three wards in the southern area (Kawasaki Ward, Saiwai Ward, and Nakahara Ward) in March 2011.



Cost of Garbage Disposal

We have made efforts in the past to realize effective and efficient construction of a garbage disposal project, etc., such as revision of charges, outsourcing of services to the private sector, etc., and the household garbage disposal cost has been on a considerable decreasing trend. However, in order to promote the 3R-focused initiatives, such as expanding the sorted collection of plastic containers and packaging in the entire city in the future, it is required to move ahead with the construction of the further effective and efficient garbage disposal project based on cost-effectiveness.



Establishment of a Safe and Secure Garbage Disposal Structure

In light of the lessons learned from the Great East Japan Earthquake that occurred in March 2011, the importance of the garbage disposal structure in which safety and stability are ensured is further increased.

Basic Plan

Fundamental Principles

Aiming to Be a Sustainable Recycling-Oriented City that is Environmentally Friendly...

With the cooperation of residents, businesses, and the government, we are reducing garbage and promoting recycling in our aim to be a sustainable recycling-oriented city that is environmentally friendly. This is being done on the basis of the 3Rs (Reduce, Reuse, and Recycle), with the objective of creating what is termed a “recycling-oriented society,” which curbs the consumption of natural resources and reduces its impact on the environment as much as possible. This is to be done by inhibiting the generation of waste, promoting recycling, and guaranteeing the proper disposal of waste.

Basic Policies

Creating a society that produces the least garbage

In order to create a recycling-oriented society, each and every person must pursue a lifestyle that does not generate and discharge garbage, and by putting this into practice, we will create a society that produces the least garbage.

Building relationships of mutual trust and cooperation between residents, businesses, and the government

In order to lessen the impact on the environment, uphold the living environment in the region, and create a city where people can live with peace of mind, the residents, businesses, and the government will play their respective roles and build relationships of mutual trust and cooperation with one another with the aim of promoting the reduction and recycling of garbage.

Upholding a healthy and comfortable living environment for residents

We will give the absolute highest priority to upholding a healthy and comfortable living environment for residents by promoting initiatives designed to reduce our impact on the environment.

Period for the Plan

From FY 2005 until FY 2015

Targets

To promote initiatives to inhibit the generation of garbage and recycle it in order to achieve the following targets, taking the actual performance from FY 2003 as the baseline.



- The amount of garbage discharged by one residents per day: 180 g reduction (Actual performance in FY 2003: 1,308 g)
⇒ The target value in FY 2015: 1,128 g)
- The amount recycled (Rate): 200,000 tons (35%)
- The amount garbage incinerated: 130,000-ton reduction (Actual performance in FY 2003: 500,000 tons)
⇒ The target value in FY 2015: 370,000 tons)

Action Plan

Based on the basic plan, an action plan in which specific measures, etc., are placed is established. (For further details, please refer to page 5 and later pages.)

Plan Structure

The plan structure is as follows.

Basic Plan (FY 2005–FY 2015)

Action Plan (FY 2013–FY 2015)

Basic Philosophy

Aiming to Be a Sustainable Recycle-Oriented City that is Environmentally Friendly...

Basic Policies

- Creating a society that produces the least garbage
- Building relationships of mutual trust and cooperation between residents, businesses, and the government
- Upholding a healthy and comfortable living environment for residents

Basic Measures

Sharing a vision of a recycling-oriented society and becoming "environmental citizens"

- (1) Promoting environmental education and environmental learning
- (2) Sharing information
 - Utilizing IT
 - Enhancing popularization and public relations
- (3) Reducing volume and rejuvenating recycling activities
- (4) Facilitating resident participation
- (5) Promoting urban beautification

Creating a recycling-oriented disposal system

- (1) Creating a society that produces the least garbage
 - Erecting a market economy that does not tolerate the generation of garbage
 - Pursuing extended producer responsibility
 - Introducing economic techniques
- (2) Converting garbage that arises unavoidably into recyclables to the extent possible
 - Thorough recycling
 - Coordination with environmental industries
- (3) Appropriately processing garbage that does not constitute resources
 - Appropriate processing that strives to reduce the environmental impact
 - Improving garbage disposal facilities

Unfurling measures via new perspective and concepts

- (1) Developing and following-up on methods for evaluating measures
 - Developing methods for analyzing the results of measures and conducting investigative studies
 - Following-up on the plan
- (2) Cost-benefit analysis
 - Rebuilding the collection structure
- (3) Establishing a safe and secure processing structure

Specific Measures (○: Major Priority Policies ○: Priority Policies)

- Enhancing and expanding the Travelling Garbage School
- Enhancing and expanding the Hands-On Visiting Courses
 - Holding 3R promotion lectures
 - Enhancing and expanding teaching materials for environmental education
 - Popularizing the reuse of tableware and using one's own bottle
 - Environmental education programs for young children
 - Holding lectures on ecological cooking
 - Enhancing and expanding the dissemination and awareness-raising bases

- Enhancing and expanding the city's homepage
- Enhancing and expanding public relations magazines
- Providing information by utilizing various media
- Disseminating the household garbage and diet check sheets

- Enhancing the cooperation with instructors for reducing waste volume, etc.
- Supporting resident recycling activities
- Hosting flea markets

- Holding the Kawasaki City Municipal Assembly for the Promotion of Waste Reduction

- Initiatives on the prevention of illegal waste disposal
- Providing thorough instruction on the improper discharge of waste
- Beautifying the environment surrounding waste collection sites
- Conducting various types of dissemination and awareness-raising campaigns

- Promoting the green purchasing
- Promoting the proper packaging of products
- Initiatives for reducing disposable shopping bags
- Enhancing and expanding the recycling and eco-shop system
- Thorough instruction aimed at reducing the volume of garbage from business activities
- Promoting the development of environmentally conscious products
- Research on effective economic techniques

- Enhancing and expanding group resource collection services
- Expanding the sorted collection of plastic containers and packaging
- Thorough sorted discharge
 - Expanding the collection centers and storefront collection
 - Recycling the small electric and electronic equipment
- Promoting the Kawasaki Raw Garbage Recycling Plan
- Establishing recycling routes for recyclables from business activities
- Promoting the use of biomass resources
- Coordination with environmental industries
- Promoting international contribution

- Researching and developing waste disposal techniques
- Reducing the landfilled amount
- Appropriately managing ISO 14001
- Promoting waste power generating services
- Initiatives for harmful waste substances and substances that are difficult to process
- Preventing the intermingling of substances that are prohibited from collection
- Shifting to the three-processing center structure
- Repairing and improving the waste disposal facilities
- Constructing the Recycle Park Asao
- Reconstructing the Tachibana Processing Center

- Inspecting and evaluating methods for analyzing the results of measures
- Following-up on the plan

- Reviewing the frequency of general garbage collection
- Introducing the vitality of the private sector
- Optimizing the collection vehicles

- Establishing a safe and secure waste disposal structure at the time of disaster

Action Plan

Period for the Plan

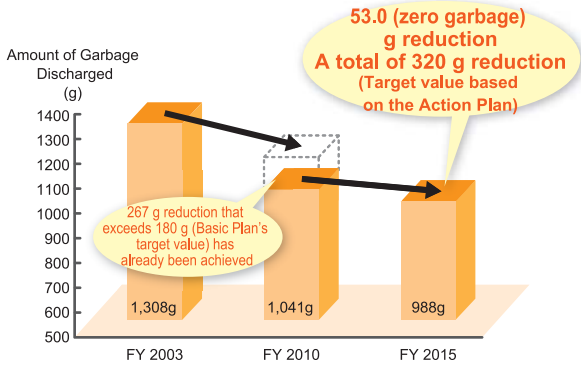
Three years from FY 2013 until FY 2015, which is the final period of the Basic Plan

Targets

We will establish the three targets below and aim to achieve them over the three-year period up until FY 2015, taking the actual performance from FY 2010 as the baseline.

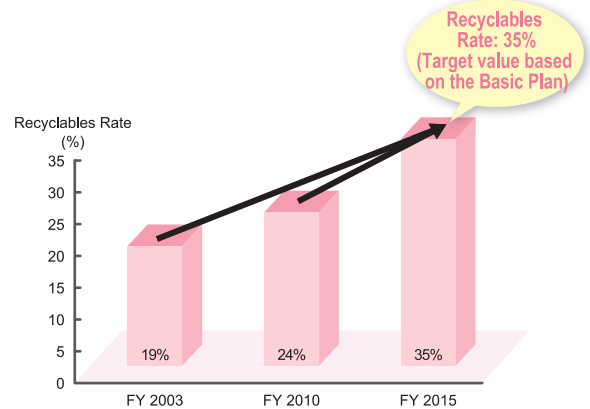
Target 1. Promote the Curbing of Waste Generated

Reduce the garbage that every resident throws out each day by 53.0 (zero garbage) grams, taking the actual performance of FY 2010 as the baseline.



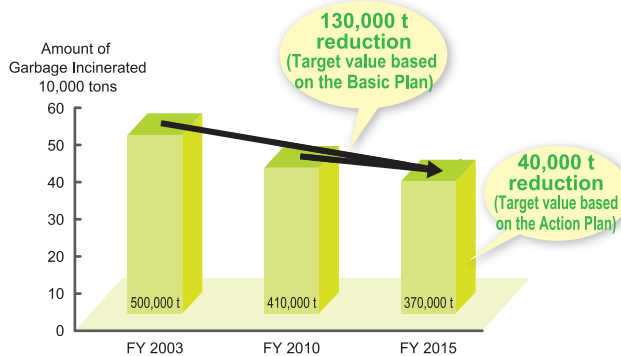
Target 2. Promote Recycling

Increase the recyclables rate to 35% in the entire city.



Target 3. Reduce the Amount Incinerated

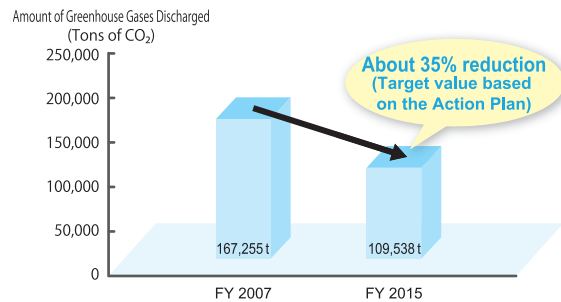
Reduce the amount of garbage incinerated by 40,000 tons, taking the actual performance of FY 2010 as the baseline.



Indicator

Indicator Greenhouse Gas Reduction Rate

Reduce the amount of greenhouse gases discharged by 35% in the waste sector by FY 2015, taking the actual performance of FY 2007 as the baseline.



Indicators of the garbage reduction and CO₂ reduction

- When you go shopping, be sure to take your own bag with you and refrain from receiving disposable shopping bags as much as possible.



One disposable shopping bag: 10 g reduction in garbage and 100 g reduction in CO₂

- When going out, you should bring along your own bottle and chopsticks so that you do not use disposable chopsticks and paper cups.



One set of disposable chopsticks: 5 g reduction One paper cup: 10 g reduction

Priority Policies

Amongst the 53 specific policies established, 18 policies, such as ones that have a high garbage reduction effect for achieving the objective, are given priorities as Priority Policies and amongst such Priority Policies, particularly important policies are positioned as four Major Priority Policies.

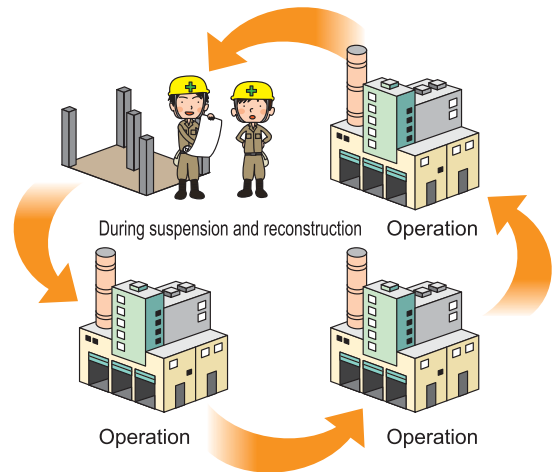
[Major Priority Policies]

Major Priority Policy ① Shifting to the Three-Disposal Center Structure [Slated to shift in FY 2015]

In the “Future Improvement Policies on the Waste Incineration Disposal Facilities,” which was formulated in October 2011, it is stated that we will shift to the three-disposal center structure from FY 2015 in which the current four premises are effectively utilized, and three disposal centers are regularly operated while one disposal center’s operation is stopped and reconstructed.

Shifting to the three-disposal center structure will not only reduce the environmental impact, such as reduction of greenhouse gases but also stable operation during reconstruction will be ensured and will lead to the reduction of expenses associated with the construction work and maintenance.

In order to surely implement the shifting in FY 2015, we will promote the reduction of annual amount of garbage incinerated to 370,000 tons and improving the collection and disposal structure in anticipation of the three-disposal center structure.



The Effect Realized by the Three-Disposal Center Structure

Shifting to the three-disposal center structure will not only ensure stable operations during reconstruction but also reduce expenses associated with the construction work and maintenance (about 72 billion yen for 40 years and about 1.8 billion yen per year) and reduce environmental impact, such as the reduction of greenhouse gases (about 36,000 tons of CO₂ annually), etc.

Major Priority Policy ② Expanding the Sorted Collection of Plastic Containers and Packaging [To be implemented in September, 2013]

The plastic containers and packaging other than PET bottles (accounts for 7.0% of garbage from household activities), which are subject to the Containers and Packaging Recycling Act, will lead to not only the reduction of garbage but also the effective use of resources and reduction of the amount of greenhouse gases discharged.

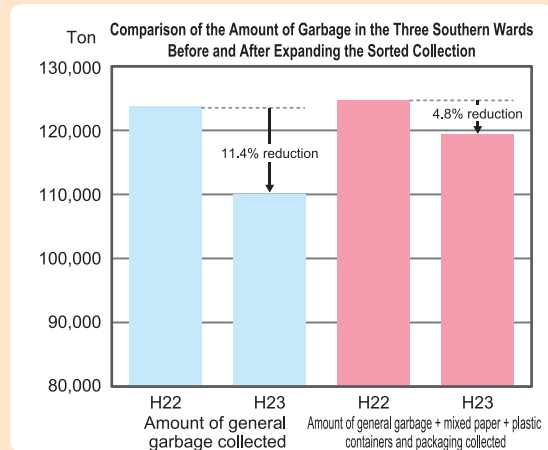
With regard to the sorting of plastic containers and packaging, as the awareness on curbing the generation will grow while each and every resident is working on the sorting in homes, synergistic effect, such as the improvement in the degree of cooperation for the sorting, curbing the generation, etc., is expected. We will include such effect, aim to further promote the recycling, and expand the sorted collection to the northern four wards to realize the implementation of the sorted collection in the entire city.



The Reduction Effect of General Garbage Before and After Expanding the Sorted Collection

The amount of general garbage in the three southern wards in which the sorted collection of plastic containers and packaging was implemented has been significantly reduced and which was more than the four northern wards as the amount was reduced by 11.4% as compared to the amount before implementing the sorted collection.

By looking at the total of the amount of the expanded sorted collection and the amount of general garbage, the curbing of waste generation in the three southern wards has been significant as it was about 4.8% from the previous year (6,027 tons) and as the amount of discharge of mixed paper from one household is large, recycling has been facilitated, which is thought that the synergistic effect of implementing the sorted collection of plastic containers and packaging has been large.



Major Priority Policy ③ Reviewing the Frequency of the General Garbage Collection [To be implemented in September, 2013]

The amount of general garbage discharged has been further reduced due to the expansion of the sorted collection of mixed paper, increasing awareness about environment, sluggish economic situation, etc. In particular, in the three southern wards in which the sorted collection of plastic containers and packaging has been implemented, the amount of general garbage discharged has been significantly reduced, and the volume also has been significantly reduced because the voluminous plastic containers and packaging have been removed.

Also, with regard to the frequency of garbage collections, including raw garbage in the ordinance-designated cities, most municipalities nationwide collect garbage twice a week as three cities including our city collect garbage three times a week and twice a week in other 17 cities.

Based on the actual conditions of the general garbage discharged, as well as the situations in other municipalities and together with the implementation of the sorted collection of plastic containers and packaging in the entire city, the frequency of general garbage collection will be changed from the existing three times a week to twice a week in September 2013 to work on the reduction of environmental impact by further promoting the reduction/recycling and reducing the collection distances and the construction of efficient project enforcement structure through the leveling of the workload.

The Effect Realized by Reviewing the Frequency of General Garbage Collection

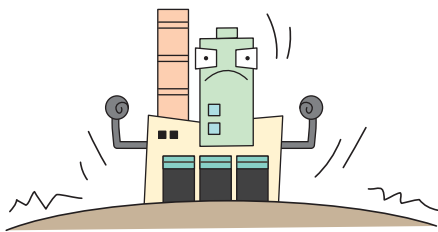
We reduced the frequency of general garbage collection from four times a week to three times a week in April 2007 to promote work efficiency and to expand the sorted collection, and as a result, we could reduce the amount of general garbage by about 7,000 tons as compared to the previous fiscal year. We could also achieve great results as we could allot the cost reduction effect, which was equivalent to several hundred million yen, to other projects.

As just described, the reduction of the frequency of general garbage collection led to the incentive for the residents' sorted discharge and eco-friendly behaviors in which the promotion of reduction and recycling as well as various implementation effects, such as the reduction of greenhouse gases due to the efficiency of garbage collection and transportation, the efficiency of the project enforcement structure, etc., are expected.



Major Priority Policy ④ Establishment of a Safe and Secure Waste Disposal Structure at the Time of Disaster

The waste disposal is one of the important lifelines that support all the residents, and it will become important to establish a safe and secure waste disposal structure in order to conserve living environment and promptly and appropriately carry out the disposal even at the time of disaster. In particular, the Great East Japan Earthquake and the aftermath of the nuclear disaster caused a tremendous amount of damage that we had



never experienced before, which also required us to consider the waste sector once again. By utilizing the lessons learned from the disaster, we will enhance the measures against disasters, such as making the disposal facilities earthquake resistant, expanding the broad-based cooperation structure, etc., and establish a safe and secure waste disposal structure, such as continuing the monitoring to confirm safety with regard to the incinerated ash, etc., from which radiological materials were detected.

Other Priority Policies

- Thorough sorted discharge
- Beautifying the environment surrounding waste collection sites
- Enhancing and expanding the Travelling Garbage School
- Initiatives for reducing disposable shopping bags
- Upgrading and expanding the group resource collection services
- Promoting waste power generation services
- Constructing Recycle Park Asao
- Enhancing cooperation with the waste reduction instructors
- Reconstructing Tachibana Waste Disposal Center
- Enhancing and expanding Hands-On Visiting Courses
- Reducing the volume of garbage from business activities and promoting the recycling
- Promoting the Kawasaki Raw Garbage Recycling Plan
- Preventing the intermingling of substances that are prohibited from collection
- Inspecting and evaluating methods for analyzing the results of measures

Specific Measures Pertaining to the Countermeasures for Global Warming

In order to reduce the amount of greenhouse gas discharge in the waste sector, we will promote the following measures:

- Shifting to the three-disposal center structure
- Expanding the sorted collection of plastic containers and packaging
- Reviewing the frequency of general garbage collection
- Optimizing the collection vehicles
- Enhancing and expanding the dissemination and awareness raising bases
- Initiatives for reducing disposable shopping bags
- Promoting waste power generation services
- Promoting the Kawasaki Raw Garbage Recycling Plan and the use of biomass resources

Specific Policies

We will aim to achieve the objective with the residents through the following specific policies (a total of 53 items), including priority policies.

To share our vision of a recycling-oriented society and become “Environmental Citizens”

◇Improvement of the dissemination and awareness raising bases

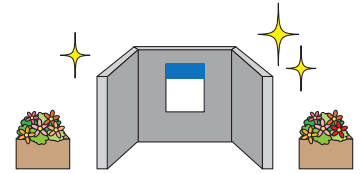
It is very effective to learn at an awareness-raising facility while experiencing the waste disposal, such as visiting a refuse incineration plant. Furthermore, as the 3Rs are closely related to the global warming issues and promote residents' initiatives for the environment; we will improve and maintain the bases in which the awareness on learning these environmental issues and hands-on activities can be carried out.



Kawasaki Eco Gurashi Miraikan

◇Beautifying the environment surrounding waste collection sites

With regard to the garbage-strewn waste collection sites, we will examine the discharging conditions, thoroughly raise awareness, and provide instructions, and by cooperating with peripheral people, as well as the waste reduction instructors, and through various activities, such as providing lectures on discharge and dissemination and awareness raising at the collection sites and supermarkets, we will strive to beautify the environment surrounding waste collection sites.



To build a recycling-oriented disposal system

◇Thoroughness of the sorted discharge

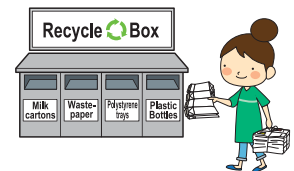
With regard to the recyclable waste, it appears that the sorted discharge is not thoroughly done, such as part of the recyclable waste is intermingled with regular garbage, etc. In order to promote the reduction of the amount of garbage incinerated, reduction of garbage generated, and recycling, we will enhance the instructions on the sorted discharge. Please cooperate in the sorted discharge of recyclable waste!



Please cooperate with the sorted discharge of recyclable waste !

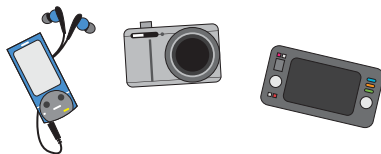
◇Upgrading and expanding collection centers and store-front collection points

We will complement the group resource collection and sorted collection and upgrade and expand the collection center for recyclable waste, such as milk cartons, white polystyrene foam trays, etc., as well as the store-front collection through recycle and eco-shops, etc. In order to promote recycling and proper processing of waste edible oils and waste fluorescent tubes, we will examine and study the measures for the recyclable waste collection centers and storefront collection.



◇Recycling of small electric and electronic equipment

Based on the sophistication of recycling technologies and the progress of systems promoted by the state, we will consider the introduction of a recycling system tailored to our city's characteristics.



◇Promotion of the use of biomass resources

For the 3R promotion and countermeasures for the global warming, we will promote the use of biomass resources, such as pruned branches, etc., that draw attention as eco-friendly energy resource.



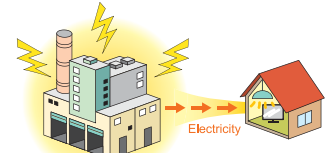
◇Promotion of international contribution

By utilizing the experiences and know-how on the advanced waste disposal that we have cultivated through the initiatives, we will promote the international contribution by providing support for proper waste disposal and recycling on a global basis while cooperating with the state, businesses, etc.



◇Promotion of a waste power generation project

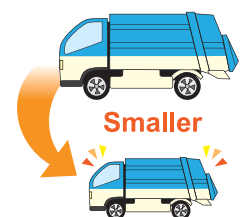
Through the promotion of a waste power generation project, etc., in which the energy is generated by waste incineration, we will curb the amount of consumption of fossil fuels and reduce greenhouse gas emissions.



To unfurl measures via a new perspective and concepts

◇Optimization of collection vehicles

In conformity to the reduction of general waste and changes in the waste quality associated with the expansion of sorted collection, we will optimize the collection vehicles, improve the efficiency of reducing greenhouse gas emissions and the project enforcement structure, and improve measures for a small area.



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 Search “Kawasaki City’s Basic Plans for the General Waste Disposal”
 in Kawasaki City’s Homepage (<http://www.city.kawasaki.jp/>)

川崎市一般廃棄物処理基本計画

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