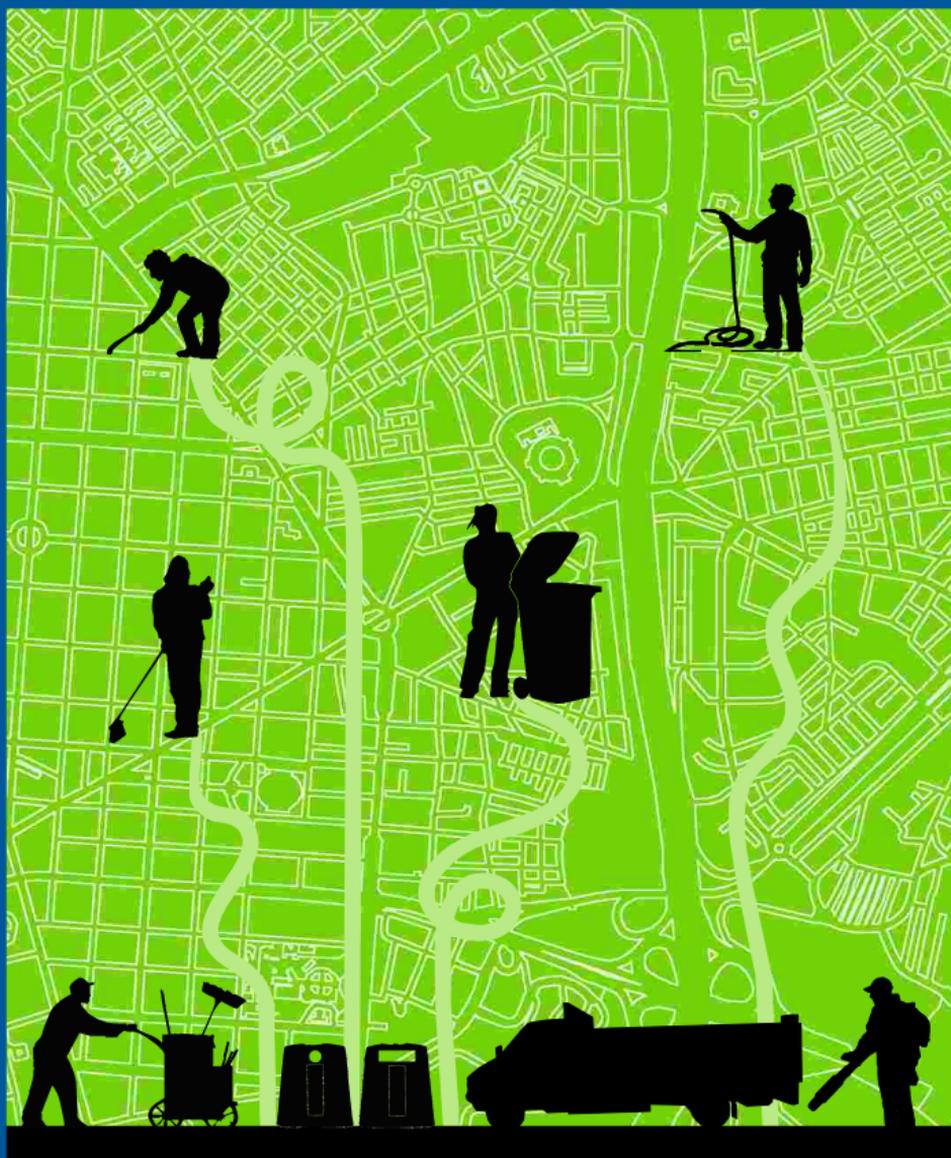


Urban cleaning and waste management in Madrid City



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Whom is it for?

The city as a whole is the objective of urban cleaning and waste management services. Therefore the different needs generated by the intense activity of a big city as Madrid have to be covered.

Homes and housings

Madrid has 3,273,000 inhabitants and approximately 300,000 building entrances, where different fractions of waste are generated.

Passers-by and drivers

Municipal surface, covering 605 Km², is submitted to intense usage that requires constant cleaning.

Offices, firms and stores

1,250,000 people entering Madrid every day join the intense economical and commercial activity of the city.

Visitants and tourists

Madrid has become an important touristic destination. More than 7 million tourists visit the city annually.

Cultural, artistic and sports events

The celebration of 6,000 events every year requires special cleaning devices so that the city can recover its pace as soon as possible.

Markets, hospitals and other sectors

There are sectors with specific needs due to the amount or type of generated waste.

Parks and green areas

At certain times of the year waste from pruning and plants can be important.

Pets

More than 255,000 dogs are registered in Madrid.

How is it carried out?

Urban waste integral management is a municipal competence and Madrid city council has one of the most complete and advanced cleaning services and infrastructures in Europe, including selective waste collection, transport, treatment and energy recovery. Criteria governing these services are:

- Daily home collection of packaging and mixed waste.
- Selective collection of glass, paper/cardboard and batteries.
- Fixed and mobile recycling centres for hazardous household and special waste.
- Periodical door-to-door collection of furniture and old junk.
- Urban cleaning (pavements, litter bins, green areas).
- Seasonal actions (snowfalls, leaves, Christmas).
- Special collection of paper and cardboard in stores and offices.
- Special glass containers for bars and restaurants.
- Special services for events.
- Urgent cleaning service (accidents, emergencies).
- Complementary collection in high production centres.
- Treatment of urban waste from companies.
- Collection of bio sanitary waste in medical centres.
- Collection of vegetal waste to produce compost.
- Dispensers of dog waste bags.
- Collection of dead animals.

Daily waste production:

4,300 tonnes

- **Convenience and minimum trouble for citizens.** Daily door-to-door collection and recycling points all over the city.
- **Source separation and selective collection.** In order to recycle waste and maximize the recovery of materials and energy as well as to reduce the volume deposited in dumps.
- **Maximum efficiency and quality.** Services 24 h, communication with citizens, and ordinary and urgent services.
- **Minimum environmental impact.** Ecological vehicles.

What is the final result?

Valdemingómez Technological Park

It's the place where all the waste of Madrid City is treated. It has 15 installations and 10 different processes to treat each type of waste. It works 24 hours a day, every day of the year, in order to recover materials and energy.

- Recovery of recyclable materials.
- Biomethanization and composting.
- Energy recovery.
- Controlled landfill.



Materials recycling.



Electricity production.



Compost.

Energy recovery

Madrid obtains 306,000 Mwh/year from waste treatment, equivalent to electric energy consumed by 96,000 housings.

Materials recovery

38,000 Tm/year of glass
120,000 Tm/year of paper/cardboard
53,000 Tm/year of other materials (plastics, metals...)

Greenhouse gas emission reduction

768,000 Tm CO₂/year

Compost production:

72,000 Tm/year

What´s for?

Urban cleaning and waste management services are key factors for life quality in the city. Their main function is to avoid sanitary risks, but their benefits are beyond public health protection.

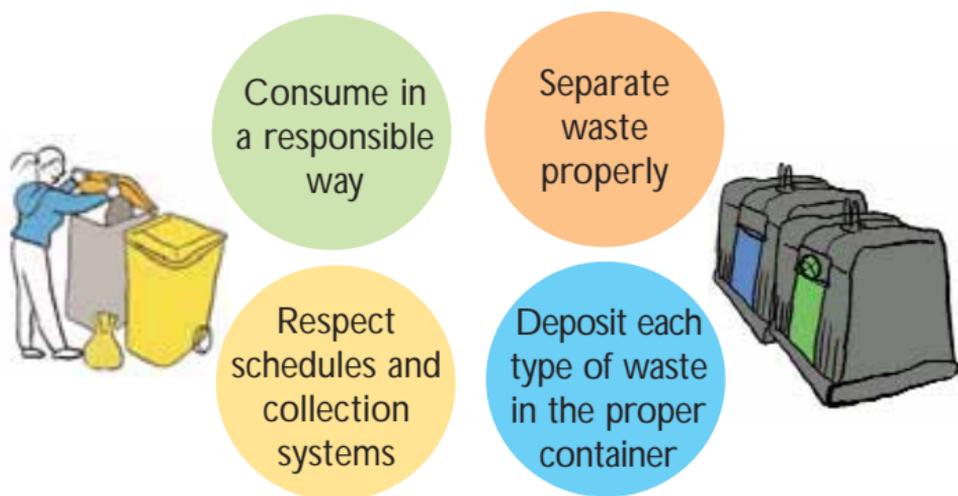
These services:

- Protect the environment by reducing waste impact.
- Facilitate recycling of materials and energy recovery.
- Enhance Madrid's image and contribute to improve environmental conditions for citizens.



Where does waste management begin?

From the moment we produce waste we become the first link in the chain. According to the way we act at home, at work or in our daily life we determine whether waste can be used or not. Only the active participation of everyone makes it possible to achieve satisfactory results:



Recycling Guide: **"Separate without doubting"**
www.munimadrid.es/reciclaje

Special Urgent Cleaning Service
SELUR

Cleaning Special Service
and Collection for Public Events

Selective paper/cardboard and glass collection

Seasonal actions

Cleaning of parks,
fountains and banks

Manual road
Cleaning

Inspection Service
and Quality Control

Neighbourhood general
cleaning

Litter bins

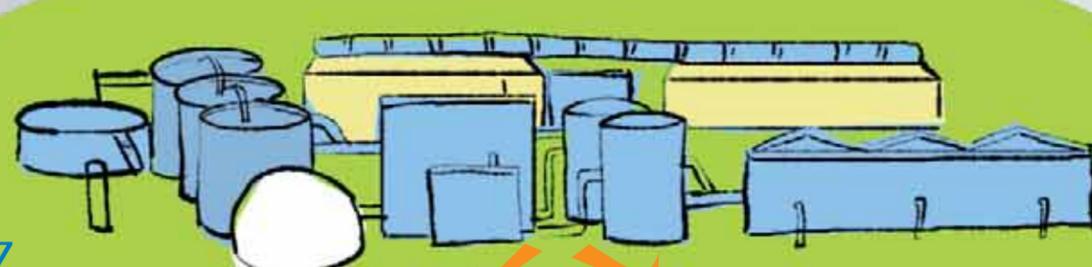
Domestics and furniture collection

We all win
with waste processing

Valdemingómez
Technological Park

Materials
recovery

Renewable
energy



Urban cleaning services

Basic Plan

Combination of systematic sweeping and hose down repeated with fixed itineraries and schedules.

Complementary Plan

Support actions without systematic character in time or place:

- Graffiti and facades cleaning
- Leaves withdrawal in autumn
- Reinforcement campaign in Christmas
- Special cleaning in leisure areas
- Actions related to snowfalls
- Special presence in events
- Plots and non-urbanized areas cleaning

Integral neighbourhood Cleaning Programmed Actions (APLIS)

Intensive shock cleaning operations including works in pavements, roads, urban furniture, facades and containers.

Special Urgent Cleaning Service (SELUR)

Special services for extraordinary incidents.

Installation, maintenance and replacement

Litter bins/dispensers of dog waste bags.

Green areas cleaning

Fountains and banks cleaning

Resources

Human resources: 7,700 workers

Mechanical resources: 1,191 vehicles

Installations: 118 cleaning deposits

Technology and environment

Technological innovation and environment protection are the service basic axis.

Vehicles used for cleaning and waste management services include the latest technological advances and constitute a real "green fleet" regarding the use of clean fuels.

Natural Gas Garbage Trucks

Electric-Hybrid trucks cleaning trucks

Bio ethanol vehicles (inspection)

Bio diesel vehicles (SELUR)



- Technological innovation is applied to industrial design of new vehicles and more environmental friendly products are used for street cleaning and removal of graffiti.
- Use of regenerated water for cleaning and hose-down operations.
- Renewable electric energy and biogas production from waste treating.

Waste collection services

Residential waste

Door-to-door collection of containers for packaging (yellow) and mixed waste (grey, orange top) every day of the year in housings, restaurants and leisure establishments, commercial premises.

Waste of specific areas

Markets and food malls, Mercamadrid and sanitary centres.

Paper and cardboard

Selective collection in collective containers distributed throughout the city, door-to-door collection in official buildings and offices, and cardboard packaging collection in commercial areas.

Glass

Selective collection in collective containers distributed throughout the city, door-to-door collection in big producer centres and special containers designed for the hotel sector.

Domestics and furniture

Programmed night collection in a periodic basis or on neighbour demand.

Batteries

Collection by means of containers fixed to shelters and urban furniture elements and in collaborator premises and entities.

Abandoned vehicles

Recycling centers

16 fixed premises and 104 mobile recycling centres locations for reception of hazardous home-originated waste, electrical appliances, large waste, rubble.

Resources

Human resources: 2,149 workers

Mechanical resources: 529 vehicles

Installations: 4 operational bases
15 fixed recycling centers

Quality control and citizen attention service

Quality control of provided services is based on three pillars:

1 Carrying out of inspection and quality control

- Regular and sporadic controls.
- Massive street data collection.
- Set of objective indicators of cleaning and collection quality.
- Monitoring and evolution reports.

2 Citizen Attention Service

- Information and service request channels (www.munimadrid.es, telephone 010).
- Monitoring of requests, suggestions and complaints.

3 Information and environmental education

- Information and service request channels (www.munimadrid.es, telephone 010)
- Visits and activities in Valdemingómez Technological Park.

Recycling Guide
**"Separate without
doubting"**



All services provided within the framework of competences, rights and obligations defined by the **Ordinance on Public Sites Cleaning and on Waste Management**

Special Urgent Cleaning Service SELUR

Specialized teams that use the latest technological innovations from SELUR. It has three operative bases with 24 hours shifts allowing teams to reach any place of the city in 20 minutes.

Selective paper/cardboard and glass collection

There are 8,000 recycling points along the city with "igloo" containers for glass and paper/cardboard.

Seasonal actions

Plans to answer to the special needs of each season: frosts and snowfalls, leaves collection, plots cleaning in order to avoid fire risks.

Cleaning of parks, fountains and banks

Specialized services carry out cleaning of 5,600 ha of green areas, more than 500 ornamental fountains and the banks of the Manzanares River.

Manual road Cleaning

Every day in morning, afternoon and night shifts, an average of 6,500 workers guarantee the city cleaning along the 24 hours. Every day, more than 350 tonnes of waste are removed.

Inspection Service and Quality Control

150,000 annual inspections enable assessing the performed works, correct anomalies and prevent situations such as abandoned vehicles, dead animals and the control of containers and rubble.

Neighbourhood general cleaning

Two integral cleanings per year are performed in district sectors with an average of 92 operators and 60 machines working jointly and intensively.

Litter bins

There are 60,000 litter bins in the city, of which 6,000 will incorporate a dispenser of dog waste biodegradable bags. 14,000 waste bins are replaced annually.

Domestics and furniture collection

Heavy waste collection is performed door-to-door with a periodicity in accordance with a calendar reminded to neighbours through posters in halls.

Cleaning Special Service and Collection for Public Events

Special road cleaning and waste collection services are organized for cultural and sports events and demonstrations, in order to return normality to affected areas as soon as possible and with minimum inconvenience for citizens. Annually the number of public events close to 6,000, equivalent to 16 events per day.

Fixed and Mobile Recycling Centers

16 recycling centres where household hazardous waste, electronic appliances and other heavy waste, rubble, etc. can be deposited. Besides, there are specially designed trucks as Mobile Recycling Centres in 104 locations of the city. Recycling Centres register more than 300,000 visits per year.

Residential collection

Municipal services collect "door-to-door" packaging and mixed waste every day of the year, including Sundays and holidays, except December 25th and January 1st. The 340 collector trucks use natural gas.

Selective collection

Madrid City Council freely provides citizens with standardized containers for packaging waste (yellow) and mixed waste (grey). There are currently 321,000 containers installed in the city, which are cleaned and maintained by the City Council.

Mechanical cleaning of pavements and roads

1,191 vehicles make up the street cleaning fleet (sweepers, water-washers, graffiti-removers vehicles, tip-up trucks, etc.)

Facades graffiti and posters removal

Different methods of graffiti removal are used: high pressure water and sand, biodegradable products and water vapour.

Specific collections

Some sectors of activity have differentiated collection services in order to deal with their specific needs.

Street hose-down

The 210 roads washing units use recycled water from Madrid sewage treatment plants.

We all win with waste processing

Valdemingómez Technological Park

Materials recovery

Renewable energy

It has 15 installations. 10 different processes to treat each type of waste. It works 24 hours a day. 728 people work therein.



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ÁREA DE GOBIERNO
DE MEDIO AMBIENTE

Information about waste management
and services request:
Telephone No. 010
www.munimadrid.es/medioambiente

**Main services that can be requested
electronically: :**

- Request of containers
- Furniture and domestics collection
- Containers/RCD (rubble) sacks
installation
- Facades graffiti cleaning
- Plots or public thoroughfare cleaning
- Residential collection of dead animals
- Containers installation for
celebration of events
- Batteries collection (associated
establishments)
- Businesses waste processing and requests
for visits to Valdemingómez T.P.

Recycling Guide
**“Separate without doubting:
how to separate domestic wastes”**
www.munimadrid.es/reciclaje

