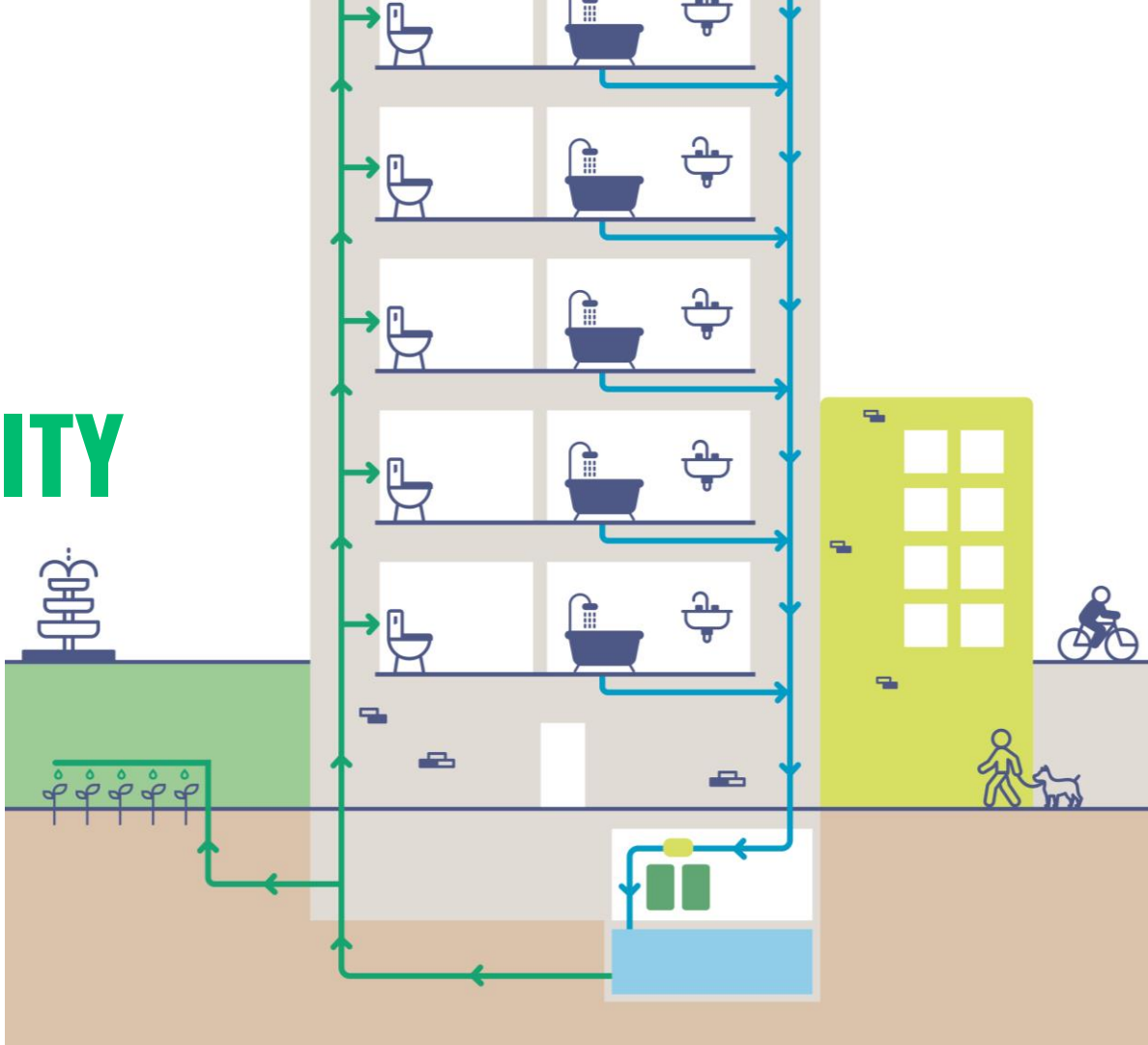
Ajuntament de Barcelona

GREYWATER
“AN OPPORTUNITY FOR SAVINGS”



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WATER, A SOURCE OF LIFE AND AN ASSET THAT NEEDS PRESERVING

For our own survival, it is imperative that we take care of this resource

CITIES, CRUCIAL PLAYERS IN THE NATURAL WATER CYCLE

We live in a city where water availability fluctuates; we must manage this resource responsibly and sustainably

CLIMATE CHANGE, THE MAJOR CHALLENGE OF THE 21st CENTURY

We must move towards using non-drinking water as an alternative available water resource

CLIMATE EMERGENCY ACTION PLAN 2030

THE FOLLOWING IS PLANNED FOR 2025:

Initiative 5.6.
Passing a byelaw that will make the use of greywater, rainwater or reclaimed water compulsory in new buildings or major renovations.

Initiative 8.9.
Promoting the use of greywater in new housing developments and renovations or for industrial purposes and considering including it in future versions of the Municipal Urban Environment Byelaw.

BYELAW REGULATING SYSTEMS FOR THE USE OF GREYWATER

A tool to establish the necessary technical criteria for the use of greywater, ensuring quality and sustainability.

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REDUCE THE CONSUMPTION OF DRINKING WATER IN THE CITY

At the household level, the recycling of greywater has become particularly important, as it allows for a significant reduction in drinking water consumption.

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REFERS TO WATER FROM BATHS AND SHOWERS

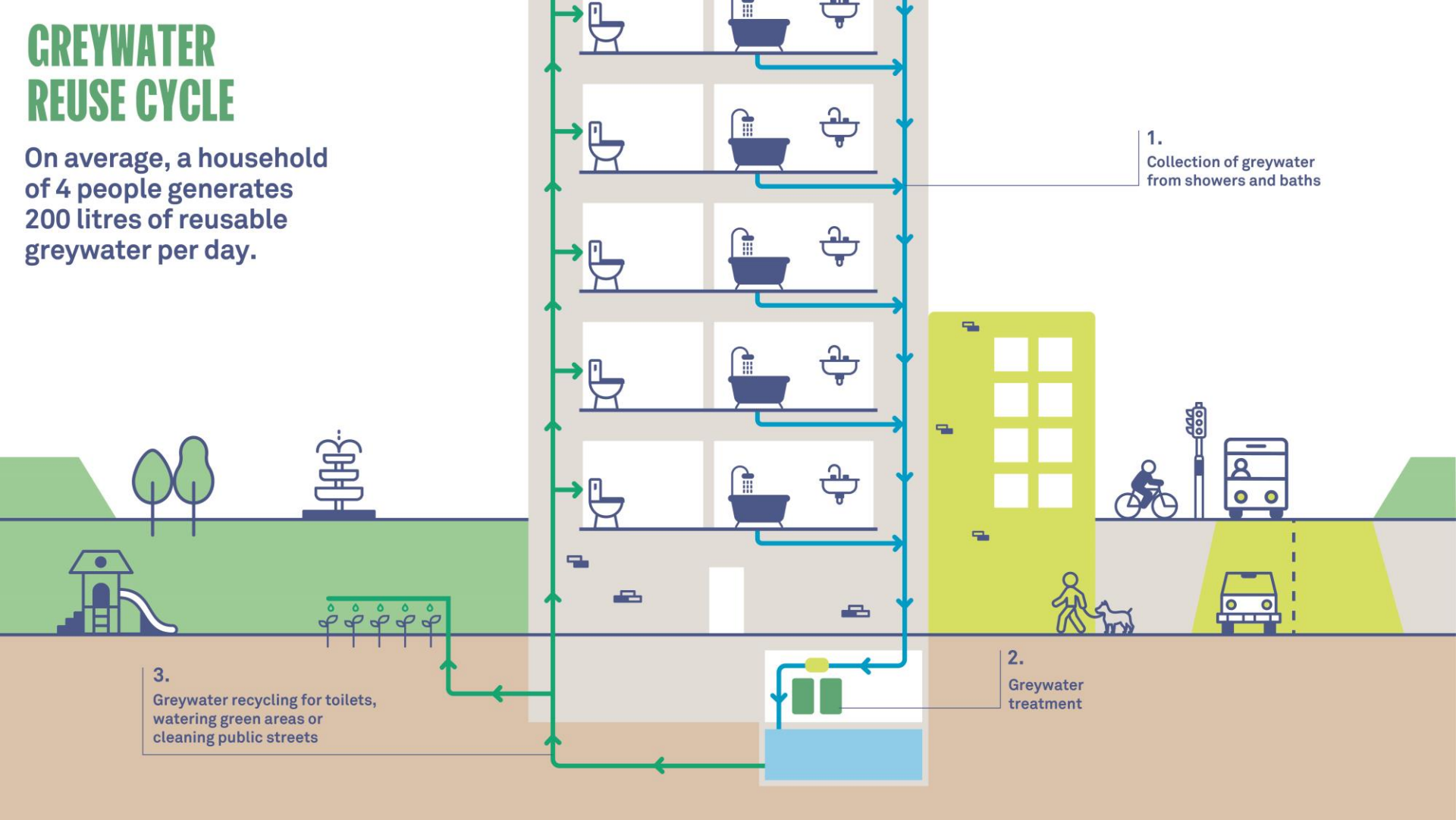
As well as excess water from swimming pools and the associated maintenance

Once treated, this water can be used for:

Toilet cisterns
Watering green areas

GREYWATER REUSE CYCLE

On average, a household of 4 people generates 200 litres of reusable greywater per day.



VERY HIGH POTENTIAL SAVINGS

50 L

OF GREYWATER GENERATED PER PERSON PER DAY IN HOUSEHOLDS

80 L

OF GREYWATER GENERATED PER PERSON PER DAY IN LUXURY HOTELS

35 L

OF WATER CONSUMPTION PER PERSON PER DAY FOR FLUSHING TOILETS

300.000 m^3

OF POTENTIAL ANNUAL DRINKING WATER SAVINGS

(considering the pace of urban development in the city over the last five years)

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THE CITY OF BARCELONA, A PIONEER IN PROMOTING THE RECYCLING OF GREYWATER

There is no specific Catalan or Spanish legislation on this matter. Local governments have been the ones to take the lead in fighting droughts.

2002

Sant Cugat del Vallès passes the first municipal byelaw for water conservation

2005

Barcelona Provincial Council passes the Model Byelaw for Water Conservation

2021

Publication of the “On-site non-potable water systems. Part 2: Systems for the use of treated greywater” UNE EN 16941-2 standard

2022

Compulsory requirement to install greywater recycling Systems in new buildings and major renovations in Gràcia and 22@ (Modification of the General Metropolitan Plan, or MPGM)

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WHERE SHOULD GREYWATER RECYCLING SYSTEMS BE INSTALLED?

YES

New constructions and renovation with 16 or more dwellings, sports centres, hotels, and buildings with greywater production exceeding 500 m^3/year

NO

Hospitals, health centres, nursing homes, schools and nurseries

WHAT TYPE OF WATER SHOULD BE COLLECTED AND TREATED?

YES

Water from showers and baths

NO

Water from sinks, kitchens, bidets, washing machines, dishwashers, industrial processes, and waters containing fats, oils, detergents, contaminating chemicals or infectious agents and/or faecal residue

WHAT ARE THE OBLIGATIONS FOR THE OWNER OF THE INSTALLATION?

The residents' association must contract a mainternance service

- Ensure the proper and appropriate use of greywater
- Hire a maintenance service and obtain a certificate of technical specifications for the wàter saving system
- Add signage indicating the greywater supply point, storage tank and pipes
- Have regular inspections of the installations and keep the documentation describing the system up to date

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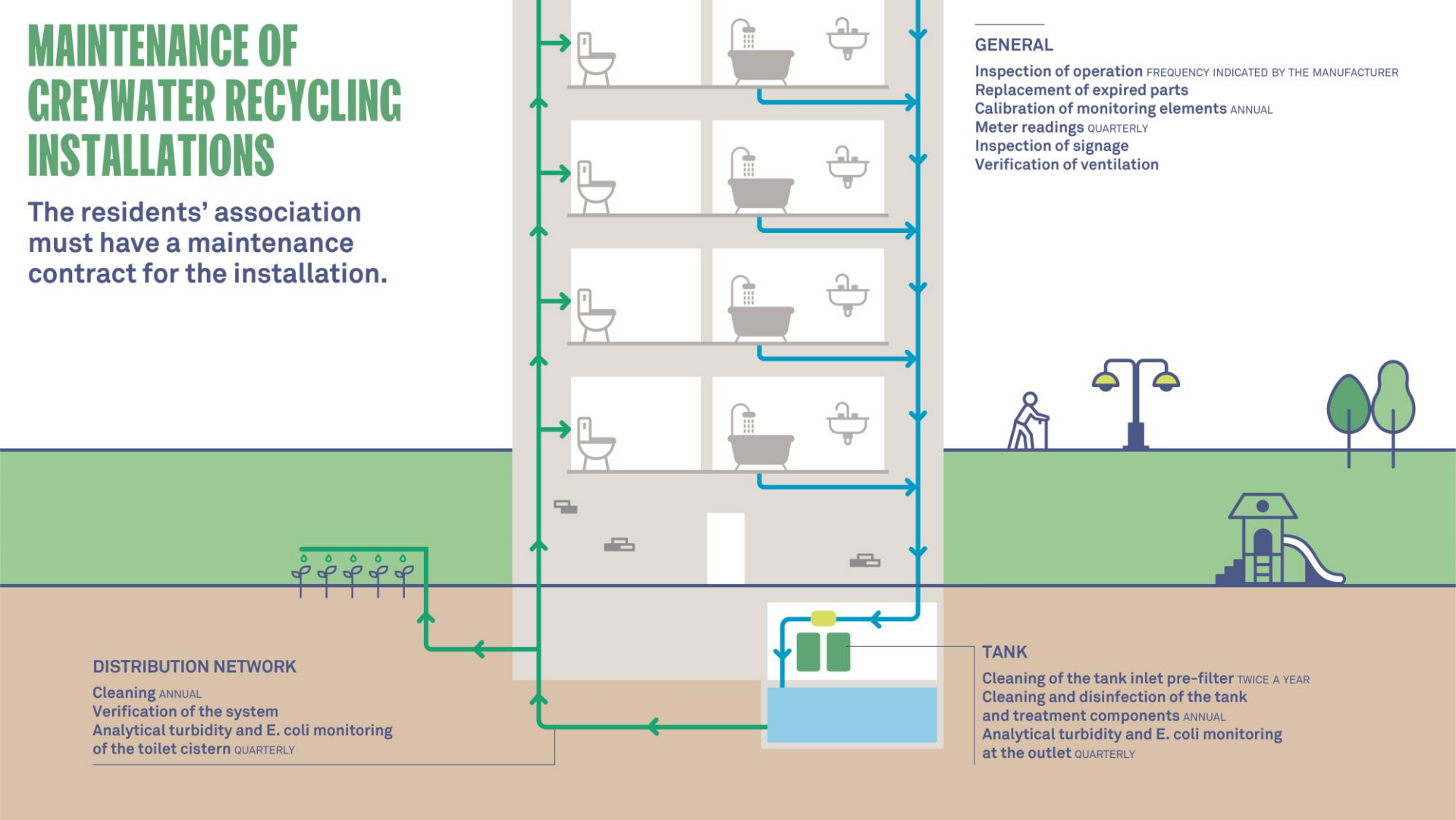
TO USE GREYWATER ENTAILS AN ECONOMIC SAVING

In buildings with 16 or more dwellings, installing a greywater recycling system saves money due to the reduction in drinking water consumption

	16 dwellings	26 dwellings	50 dwellings
Annual maintenance cost per dwelling	95 €	90 €	60 €
Annual water consumption savings per dwelling (including the residents' association)	-185 €	-214 €	-230 €
ANNUAL COST PER DWELLING	-90 €	-124 €	-170 €

MAINTENANCE OF GREYWATER RECYCLING INSTALLATIONS

The residents' association must have a maintenance contract for the installation.



GENERAL

Inspection of operation FREQUENCY INDICATED BY THE MANUFACTURER
Replacement of expired parts
Calibration of monitoring elements ANNUAL
Meter readings QUARTERLY
Inspection of signage
Verification of ventilation

DISTRIBUTION NETWORK

Cleaning ANNUAL
Verification of the system
Analytical turbidity and E. coli monitoring of the toilet cistern QUARTERLY

TANK

Cleaning of the tank inlet pre-filter TWICE A YEAR
Cleaning and disinfection of the tank and treatment components ANNUAL
Analytical turbidity and E. coli monitoring at the outlet QUARTERLY

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BARCELONA, A RESPONSIBLE CITY

As a city, we assume responsibility and are ready to address the climate emergency and any ensuing drought episodes that may occur.

DRINKING WATER SAVINGS

The potential for drinking water savings through greywater recycling is very high, up to 300,000 m3 annually.

ECONOMIC SAVINGS

These types of installations also result in economic savings due to the reduction in drinking water consumption, which helps offset the maintenance costs.

MINIMAL INVESTMENT

The investment required to install these new systems in new constructions and major renovations is minimal and is quickly recovered.

THANK YOU FOR YOUR COOPERATION!

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