

# **Sample Water Audit Forms**

# BOMA GO-GREEN

## Water Audit

### Sample 1

## Building Information

Building Name \_\_\_\_\_

Building Address \_\_\_\_\_

Owner \_\_\_\_\_ (and/or) Manager \_\_\_\_\_

Age of building \_\_\_\_\_ Size of building \_\_\_\_\_

Type of building: \_\_\_\_\_ Major use/s and area of each area type:

Office: \_\_\_\_\_ sf Other (specify: \_\_\_\_\_) \_\_\_\_\_ sf

Clinic: \_\_\_\_\_ sf Other (specify: \_\_\_\_\_) \_\_\_\_\_ sf

Warehouse: \_\_\_\_\_ sf Other (specify: \_\_\_\_\_) \_\_\_\_\_ sf

Retail: \_\_\_\_\_ sf

Numbers of permanent occupants: \_\_\_\_\_

(optional) Number of Women \_\_\_\_\_ Number of Men \_\_\_\_\_

## Utility/Consumption Data

Water meter/s (utility meters):

	Meter #	Size	Area serving
Meter	_____	_____	_____
Meter	_____	_____	_____

Annual water consumption for meter # \_\_\_\_\_ consumption \_\_\_\_\_

Monthly consumption

Jan \_\_\_\_\_ Feb \_\_\_\_\_ March \_\_\_\_\_ April \_\_\_\_\_  
May \_\_\_\_\_ June \_\_\_\_\_ July \_\_\_\_\_ Aug \_\_\_\_\_  
Sept \_\_\_\_\_ Oct \_\_\_\_\_ Nov \_\_\_\_\_ Dec \_\_\_\_\_

Annual water consumption for meter # \_\_\_\_\_ consumption \_\_\_\_\_ m<sup>3</sup>  
Monthly consumption:

Jan \_\_\_\_\_ Feb \_\_\_\_\_ March \_\_\_\_\_ April \_\_\_\_\_  
May \_\_\_\_\_ June \_\_\_\_\_ July \_\_\_\_\_ Aug \_\_\_\_\_  
Sept \_\_\_\_\_ Oct \_\_\_\_\_ Nov \_\_\_\_\_ Dec \_\_\_\_\_

## Washrooms

### Toilets

#### Tank type:

Number \_\_\_\_\_ @ \_\_\_\_\_ Gallons/litres per flush  
Number \_\_\_\_\_ @ \_\_\_\_\_ Gallons/litres per flush  
Number \_\_\_\_\_ @ \_\_\_\_\_ Gallons/litres per flush  
Number \_\_\_\_\_ @ \_\_\_\_\_ Gallons/litres per flush

#### Tankless (flushometer equipped):

Number \_\_\_\_\_ @ \_\_\_\_\_ Gallons/litres per flush  
Number \_\_\_\_\_ @ \_\_\_\_\_ Gallons/litres per flush  
Number \_\_\_\_\_ @ \_\_\_\_\_ Gallons/litres per flush

### Urinals

#### Flush tank:

Number of flush tanks: \_\_\_\_\_ Capacity of flush tank: \_\_\_\_\_ Gallons/litres

Number of urinals per tank: \_\_\_\_\_

Flush interval: \_\_\_\_\_

**Manual flush:**

Number \_\_\_\_\_ @ \_\_\_\_\_ Gallons/litres per flush

Number \_\_\_\_\_ @ \_\_\_\_\_ Gallons/litres per flush

Number \_\_\_\_\_ @ \_\_\_\_\_ Gallons/litres per flush

**Sensor flush:**

Number \_\_\_\_\_ @ \_\_\_\_\_ Gallons/litres per flush

Number \_\_\_\_\_ @ \_\_\_\_\_ Gallons/litres per flush

Number \_\_\_\_\_ @ \_\_\_\_\_ Gallons/litres per flush

Newer urinals and toilets have the gallons/litres per flush printed on the unit with the name of the manufacturer. Older toilets and urinals do not. If there is no indication on flush volume, note the manufacturer and the age of the toilet or urinal. With this information the manufacturer can provide flush volume information. The volume of the flush can be adjusted on these units. The flushometer manufacturer can provide the flush volume data or the data may be found in the building maintenance manuals.

**Basins/faucets**

# of faucets \_\_\_\_\_ Flow rate \_\_\_\_\_ gpm/ls sensor/meter control

# of faucets \_\_\_\_\_ Flow rate \_\_\_\_\_ gpm/ls sensor/meter control

# of faucets \_\_\_\_\_ Flow rate \_\_\_\_\_ gpm/ls sensor/meter control

# of faucets \_\_\_\_\_ Flow rate \_\_\_\_\_ gpm/ls sensor/meter control

**Showers**

Number of showers \_\_\_\_\_ Showerhead flow rate \_\_\_\_\_ gpm/ls

Number of showers \_\_\_\_\_ Showerhead flow rate \_\_\_\_\_ gpm/ls

Number of showers \_\_\_\_\_ Showerhead flow rate \_\_\_\_\_ gpm/l/s

Number of showers \_\_\_\_\_ Showerhead flow rate \_\_\_\_\_ gpm/l/s

## Kitchens/Cafeterias/Lunch rooms

Number of meals served/day: \_\_\_\_\_

Number of kitchen sinks/ faucets: \_\_\_\_\_

Are kitchen faucets equipped with aerators? \_\_\_\_\_

Do spray heads have automatic shut off? \_\_\_\_\_

Are walk-in refrigerators/freezers water cooled? \_\_\_\_\_

Are refrigerators equipped with icemakers? \_\_\_\_\_

Do refrigerators provide drinking water? \_\_\_\_\_

Are icemakers water cooled? \_\_\_\_\_

Do kitchens use:      garbage disposals      composting      neither

Is there a dishwasher? \_\_\_\_\_      Average number of loads per week: \_\_\_\_\_

Are only full loads washed? \_\_\_\_\_

Are dishes routinely pre-rinsed prior to wash? \_\_\_\_\_

Is frozen food routinely thawed under running water? \_\_\_\_\_

Are kitchen floors hosed clean? \_\_\_\_\_      How often? \_\_\_\_\_

Are hoses equipped with high-pressure, water efficient nozzles? \_\_\_\_\_

Number of Drinking fountains: not cooled \_\_\_\_\_      water cooled \_\_\_\_\_      air cooled \_\_\_\_\_

Number of Vending machines/ coffee makes/ water coolers/ etc. connected to the domestic water system:  
\_\_\_\_\_

Number of Ice machines:      air cooled \_\_\_\_\_      water cooled \_\_\_\_\_

## Mechanical (HVAC) Equipment

## A/C Equipment

Are cooling towers in use at your facility? \_\_\_\_\_ Number: \_\_\_\_\_  
(Check settings for level of total dissolved solids (TDS) at blow-down and frequency.)

Is makeup water metered? \_\_\_\_\_

Does your municipality provide for sewer charge rebates for cooling towers? \_\_\_\_\_

Are you receiving a rebate? \_\_\_\_\_

## Heating Equipment

Are boilers in use at your facility? \_\_\_\_\_ Number: \_\_\_\_\_  
(For steam boilers check settings for level of total dissolved solids (TDS) at blow-down and frequency.)

Is make up water metered? \_\_\_\_\_

## Ancillary Equipment

Are water-cooled air compressors in use? \_\_\_\_\_

Are water-cooled pumps in use? \_\_\_\_\_

Is make up to heating and cooling loops metered, monitored and logged? \_\_\_\_\_

List any other machines that use domestic water:

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Are water softeners in use? \_\_\_\_\_ Number: \_\_\_\_\_

Is softener regeneration automated? \_\_\_\_\_

If automatic regeneration, is it initiated by:    time                    meter                    sensor

Is resin cleaner used? \_\_\_\_\_

## Cleaning/Janitorial

Are janitorial staff aware of office water conservation efforts? \_\_\_\_\_

## **Parking Areas**

Are hoses used for cleaning parking areas? \_\_\_\_\_

Are hoses equipped with fine-spray/high-pressure/water-efficient nozzles? \_\_\_\_\_

Are dry-clean (rather than wet-clean) practices and procedures in place? (i.e. sweep instead of hosing, scrape before spraying, etc.) \_\_\_\_\_

## **Walkways**

Are office sidewalks and outside walls pressure-washed on a regular basis? \_\_\_\_\_

How often? \_\_\_\_\_

## **Landscaping/Irrigation**

Does your landscape use mulch? \_\_\_\_\_

Are drought-tolerant, native plants used? \_\_\_\_\_

Does your facility have an automatic irrigation system? \_\_\_\_\_

What does the system irrigate? \_\_\_\_\_

How often? \_\_\_\_\_ At what time of day ? \_\_\_\_\_

Is there a rain gauge and/or rain sensor incorporated in your system? \_\_\_\_\_

Are there manual override controls for your system? \_\_\_\_\_

Is your irrigation water metered? \_\_\_\_\_

Is there a municipal sewer charge rebate on irrigation water? \_\_\_\_\_

Do you receive a rebate? \_\_\_\_\_

Do you use drip irrigation for plantings, trees and shrubs? \_\_\_\_\_

Are hoses used for irrigation? \_\_\_\_\_

Are hoses equipped with fine-spray/high-pressure/water-efficient nozzles? \_\_\_\_\_

Does your facility have any pools or fountains? \_\_\_\_\_ Number: \_\_\_\_\_

When are fountains running? \_\_\_\_\_

Do fountains use recycled water? \_\_\_\_\_

Are they part of a closed-loop system? \_\_\_\_\_

## Maintenance Issues

Are faucets, pipes and plumbing checked regularly for leaks? \_\_\_\_\_

How often? \_\_\_\_\_

Are maintenance staff to respond to and repair leaks? \_\_\_\_\_

If you control your own maintenance program:

How do you handle reporting and repair of leaks? \_\_\_\_\_

What priority is given to and how quickly are leaks usually repaired? \_\_\_\_\_

## Planned Action:

In this section planned actions to reduce water consumption should be listed. For example if your building is using 20 litres per flush toilets the action may be to change those out for low flush toilets (6 litres per flush).

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# Water Audit Guide

## Sample 2

This data collection guide is designed to help you analyze water use in your facility.  
Some items may not apply to all facilities.

Agency: \_\_\_\_\_

Facility Name: \_\_\_\_\_

Address: \_\_\_\_\_

Date of Assessment: \_\_\_\_\_

Audit Coordinator(s): \_\_\_\_\_

Assessment Team Members: \_\_\_\_\_

*As you tour your facility and consider each point of water consumption, determine whether each use is essential or non-essential. Check the box in the left column to mark essential uses.*

### Background

Baseline water usage: \_\_\_\_\_

Local water provider: \_\_\_\_\_

Where does your water come from? \_\_\_\_\_

Number of buildings at facility: \_\_\_\_\_ Size of buildings (area): \_\_\_\_\_

Area of grounds: \_\_\_\_\_ Size of motor pool (# of vehicles): \_\_\_\_\_

Number of employees per shift: \_\_\_\_\_ Number of shifts per day: \_\_\_\_\_

Average number of visitors/occupants per day (if applicable): \_\_\_\_\_

Water pressure at your facility: \_\_\_\_\_ (psi)

(Often reducing water pressure by merely 10 or 15 percent can reduce water consumption significantly without interfering in daily consumption activities. Water pressure that is too high can result in leaks.)

Does staff have good general water conservation awareness habits?  Yes  No

Have you ever had a water-balance or leak-check?  Yes  No

(Entails shutting off all known water usage. If the meter records any water usage during this period, you have a leak or undocumented consumption.)

Is there an on-site water treatment facility?  Yes  No

If so, give a brief description of the facility, flow rates, chemical additions, and average cost (per unit volume).

Is there an on-site wastewater treatment facility?  Yes  No

If so, give a brief description of the facility, flow rates, chemical additions, and average cost (per unit volume).

Size, type, and location of water meter(s): \_\_\_\_\_ Size, type,  
and location of wastewater meter(s): \_\_\_\_\_

Describe the amount, location, and use of untreated groundwater if you use it at your facility:

\_\_\_\_\_

What, if any, water efficiency measures are already in place? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### Personal Water Consumption

Number of restrooms: \_\_\_\_\_ Number of toilets (total): \_\_\_\_\_

Note: Many fixtures have the average flow rate printed on the fixture itself, along with the make and model. If you cannot find this printed information, consult your maintenance staff or facility manager.

Type of toilets and average water consumption in gallons per flush (gpf):

\*Note: Most toilets are either gravity flush, flush valve/flushometer/tankless, or pressurized tank types.

Toilet type: \_\_\_\_\_ Number: \_\_\_\_\_ Average gpf: \_\_\_\_\_

Toilet type: \_\_\_\_\_ Number: \_\_\_\_\_ Average gpf: \_\_\_\_\_

Urinal model: \_\_\_\_\_ Number: \_\_\_\_\_ Average gpf: \_\_\_\_\_

Are toilets equipped with toilet dams or low-flow flapper valves?  Yes  No

Do flush valve (tankless) toilets have water-saving diaphragms?  Yes  No

Are toilets equipped with automatic water-flushing systems?  Yes  No

If so, what is the timing cycle? \_\_\_\_\_

Are the sensors/timers coordinated with regular work hours?  Yes  No

Total water consumption per workday from toilet flushes: \_\_\_\_\_

\* Assuming each employee/occupant uses the bathroom 4x per workday

Number of restroom faucets (total): \_\_\_\_\_ Faucet flow rate: \_\_\_\_\_ gpm

Are faucets equipped with aerators?  Yes  No

Are faucets equipped with automatic or metered shutoff mechanisms?  Yes  No

Number of showers (total): \_\_\_\_\_ Showerhead flow rate: \_\_\_\_\_ gpm

Number of drinking fountains: \_\_\_\_\_ Fountain flow: \_\_\_\_\_ gpm

Are fountains  air-cooled or  water-cooled?

## Kitchens

Number of staff kitchen areas: \_\_\_\_\_

Number of kitchen sinks/ faucets: \_\_\_\_\_ Faucet flow rate: \_\_\_\_\_ gpm

Are kitchen faucets equipped with aerators?  Yes  No

Do refrigerators use water coolant systems?  Yes  No

Are refrigerators equipped with icemakers?  Yes  No

Are icemakers:  Water-cooled  Air-cooled

Do refrigerators provide drinking water?  Yes  No

Do kitchens use:  garbage disposals  composting  neither

Is there a dishwasher?  Yes  No

Average number of loads per week: \_\_\_\_\_

## Cafeterias

Number of kitchen areas: \_\_\_\_\_ Area: \_\_\_\_\_

Number of faucets (total): \_\_\_\_\_ Faucet flow rate: \_\_\_\_\_ gpm

Are faucets equipped with aerators?  Yes  No

Are faucets equipped with flow restrictors?  Yes  No

Number of dishwashers: \_\_\_\_\_ Make & Model: \_\_\_\_\_

Average number of loads per day: \_\_\_\_\_ Water consumption per load: \_\_\_\_\_

Are dishes pre-washed?  Yes  No

Is potable water used for pre-washing dishes?  Yes  No

Is dishwasher wastewater reused?  Yes  No

Does the flow of water to the dishwasher stop when the flow of items being washed stops?  Yes

No

Does the flow of water to the garbage disposal stop when the disposal motor stops? (Many disposals have two water-supply lines, one to the bowl and one to the grinding chamber. Check both.)  Yes  No

Number of ice machines: \_\_\_\_\_ Are ice machines  air-cooled or  water-cooled?

Number of refrigerators: \_\_\_\_\_

Do refrigerators use water coolant systems?  Yes  No

Is frozen food routinely thawed under running water?  Yes  No

Do steam tables on buffet lines use potable water?  Yes  No

What is done with water from steam tables at closing time? \_\_\_\_\_

Are kitchen floors hosed clean?  Yes  No How often? \_\_\_\_\_

Are hoses equipped with high-pressure, water efficient nozzles?  Yes  No

Are linens washed on-site?  Yes  No How often? \_\_\_\_\_

### Laboratory Consumption

Number of Labs (total in facility): \_\_\_\_\_

Number of sinks/ faucets: \_\_\_\_\_ Faucet flow rate: \_\_\_\_\_ gpm

Are faucets equipped with aerators?  Yes  No

List lab equipment that uses water in any way:

Equipment	Amount used	Closed-loop?	Potable? Reused?
_____	_____	<input type="checkbox"/> Y <input type="checkbox"/> N	_____
_____	_____	<input type="checkbox"/> Y <input type="checkbox"/> N	_____
_____	_____	<input type="checkbox"/> Y <input type="checkbox"/> N	_____
_____	_____	<input type="checkbox"/> Y <input type="checkbox"/> N	_____
_____	_____	<input type="checkbox"/> Y <input type="checkbox"/> N	_____
_____	_____	<input type="checkbox"/> Y <input type="checkbox"/> N	_____

Describe lab procedural/clean-up practices that consume water. \_\_\_\_\_

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Are procedures and clean-up practices posted in the lab?  Yes  No

### Mechanical Consumption

Number of water heater(s): \_\_\_\_\_ Size: \_\_\_\_\_

Are water softeners in use?  Yes  No Number: \_\_\_\_\_

Backwash? Frequency: \_\_\_\_\_ Duration: \_\_\_\_\_

Are drink machines in vending areas  air-cooled or  water-cooled?

Are cooling towers in use at your facility?  Yes  No Number: \_\_\_\_\_

For each cooling tower, approximate how much make-up water is needed or used to replace water lost to blow-down, evaporation, and other process inefficiencies.

Check settings for level of total dissolved solids (TDS) at blow-down and frequency.

Are boilers in use at your facility?  Yes  No Number: \_\_\_\_\_

For each boiler, approximate how much make-up water is needed or used to replace water lost to blow-down, evaporation, and other process inefficiencies.

Check settings for level of total dissolved solids (TDS) at blow-down and frequency.

Are water-cooled air compressors in use?  Yes  No

Are water-cooled pumps in use?  Yes  No

List any other machines that use non-contact cooling water:

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## Heating, Ventilating and Air Conditioning (HVAC) Consumption

What type of HVAC system do you have? \_\_\_\_\_

Does your HVAC system have condensate collection and/or re-use?  Yes  No

Is your HVAC system always on?  Yes  No

Is your HVAC system  air-cooled or  water-cooled?

If water-cooled, is your system  open loop or  closed-loop?

## Cleaning Use

Motor Pool:

Number of automotives: \_\_\_\_\_ Where are they washed? \_\_\_\_\_ How frequently? \_\_\_\_\_

Number of watercraft: \_\_\_\_\_ Where are they washed? \_\_\_\_\_ How frequently? \_\_\_\_\_

Are hoses used?  Yes  No

Are hoses equipped with fine-spray/high-pressure/water-efficient nozzles?  Yes  No

Are dry-clean (rather than wet-clean) practices and procedures in place? (i.e. sweep instead of hosing, scrape before spraying, etc.)  Yes  No

Are office windows washed on a regular basis?  Yes  No

How often? \_\_\_\_\_

Are office sidewalks and outside walls pressure-washed on a regular basis?  Yes  No

How often? \_\_\_\_\_

## Janitorial Use

Are janitorial staff aware of office water conservation efforts?  Yes  No

Are there areas that janitors mop?  Yes  No Where: \_\_\_\_\_

Area mopped (ft<sup>2</sup>): \_\_\_\_\_ How often? \_\_\_\_\_

Are hoses used?  Yes  No

Are hoses equipped with fine-spray/high-pressure/water-efficient nozzles?  Yes  No

Are dry-clean (rather than wet-clean) practices and procedures in place? (i.e. sweep instead of hosing, scrape before spraying, etc.)  Yes  No

List other janitorial practices that consume water.

Task	Where	How often	Average water used
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

### Landscaping Consumption

What types of vegetation are planted in the landscaping surrounding your facility?

Plant Name	Native?	Average water consumption
_____	<input type="checkbox"/> Y <input type="checkbox"/> N	_____
_____	<input type="checkbox"/> Y <input type="checkbox"/> N	_____
_____	<input type="checkbox"/> Y <input type="checkbox"/> N	_____
_____	<input type="checkbox"/> Y <input type="checkbox"/> N	_____
_____	<input type="checkbox"/> Y <input type="checkbox"/> N	_____
_____	<input type="checkbox"/> Y <input type="checkbox"/> N	_____
_____	<input type="checkbox"/> Y <input type="checkbox"/> N	_____
_____	<input type="checkbox"/> Y <input type="checkbox"/> N	_____
_____	<input type="checkbox"/> Y <input type="checkbox"/> N	_____
_____	<input type="checkbox"/> Y <input type="checkbox"/> N	_____

Soil type (in your region): \_\_\_\_\_ Does your landscape use mulch?  Yes  No

Does your facility have an irrigation system?  Yes  No Type: \_\_\_\_\_

Where does the system irrigate? \_\_\_\_\_

How often? Summer: \_\_\_\_\_ Winter: \_\_\_\_\_

Time of day? Summer: \_\_\_\_\_ Winter: \_\_\_\_\_

Is there a rain gauge incorporated in your system?  Yes  No

Are there manual override controls for your system?  Yes  No

Are hoses used for irrigation?  Yes  No

Are hoses equipped with fine-spray/high-pressure/water-efficient nozzles?  Yes  No

Does your facility have any pools or fountains?  Yes  No Number: \_\_\_\_\_

Where? \_\_\_\_\_

When are fountains running? \_\_\_\_\_ Typical water consumption? \_\_\_\_\_

Do fountains use recycled water?  Yes  No

Are they part of a closed-loop system?  Yes  No

Are paved areas  swept clean  blown clean or  hosed?

### Maintenance

Are faucets, pipes and plumbing checked regularly for leaks?  Yes  No

How often? \_\_\_\_\_

Is there regularly scheduled preventive maintenance in your facility?  Yes  No

Is maintenance documented with standard records or inspection logs?  Yes  No

#### If you contract with a maintenance company:

How quickly does maintenance staff respond and repair leaks? \_\_\_\_\_

#### If you control your own maintenance program:

How do you handle reporting and repair of leaks? \_\_\_\_\_

How quickly are leaks usually repaired? \_\_\_\_\_

### Contractor Water Use

Are contractors aware of agency water conservation efforts?  Yes  No

Do any contractors have access to or use of facility water?  Yes  No

Do contractors know where the water line is located?  Yes  No

(Oftentimes, contractors accidentally drive heavy equipment over water lines, cracking the piping and causing expensive leakage and potentially dangerous ground saturation.)

List any contractor activities that consume water. (regular, occasional or one-time)

Activity	Location	Frequency/Season	Water used
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Notes/ Other Water Consumption