

CITY OF CAPE MAY: WATER AUDIT
Sponsored by: Cape May City Environmental Commission
Winter 2025

WHAT IS A HOUSEHOLD WATER AUDIT?

A household water audit helps to assess how much water is used and where it is used in the home. Conducting a water audit involves recording how long water is run and when. The information can then be assessed to calculate total consumption and to identify potential conservation opportunities.

WHAT ARE THE BENEFITS OF CONDUCTING A WATER AUDIT?

Conducting a water audit can help you save money by reducing your home water (and sewer) bill. It will also make you aware of how you use your water and can, through assessment, help to identify ways to minimize water use by implementing certain conservation measures.

HOW WILL WE USE YOUR DATA?

The City of Cape May is partnering with Columbia University's Sustainability Management Capstone Project, which will assess the results of the survey as part of a study on drinking water, waste water and hydrology in Cape May. The goal of the study is to enhance the City's efforts to improve the efficiency, environmental sustainability and cost-effectiveness of its water systems.

NEED HELP? For further resources or support, please contact David Scheffler, Environmental Commission Secretary at dscheffler@capemaycity.com.

GENERAL INFORMATION

Household Size & Occupants

- Family Name / Identifier (optional; if you choose not to include your name, please use another identifier - the name of an animal, color, or month):
- Address (optional):
- Approximate Age of House or Year of Construction (if known):
- Type of Dwelling: Single-family Detached / Townhouse / Condo / Apartment / Other (circle all that apply)
- Square Footage of House:
- Number of bathrooms (including half baths):
- Frequency of Occupancy:
 - i. Primary or Secondary Residence (circle one)

Name / Identifier:

- ii. Winter / Spring / Summer / Fall (circle all that apply)
- Number of Household Members:
- Number of children under 12?
- Are there any children, elderly, or individuals with special water needs?
- Average of days per year with increased occupancy (i.e. hosting non-resident guests):
- Average of guests during periods of increased occupancy?

Water Source & Usage Overview

- Primary Water Source: Public Utility? Yes / No (circle one)
- Do you have a secondary water source? Yes / No (circle one)
 - i. If yes, please describe:
- Do you use any water treatment systems (e.g., filtration, softeners)?

WATER USAGE BACKGROUND

Quarterly water use/bill (Q1-Q4 2024):

Quarterly water use/bill (Q1-Q4 2023):

Have you noticed any significant changes in your water bill recently?

Do you currently track your water usage? Yes / No (circle one) If yes, how?

Water Meter Reading Method:

- Current Meter Reading: _____ (units: cubic feet or gallons (circle one))
- Record the next reading at the same time tomorrow: _____
- Calculate Daily Usage: (Next Reading - Current Reading) = _____ (units)

Estimated Average Daily Use Per Person:

- Divide total daily usage by household members: _____ gallons/person/day

Name / Identifier:

CALCULATING INDOOR WATER USE

Flow Rates & Usage Estimation For each fixture or appliance, measure flow rate or use the listed averages:

- **Faucets:** Collect water in a container for 10 seconds, measure with a measuring cup, and multiply by 6 to estimate gallons per minute (gpm). (Note: 128 fluid ounces is a gallon)
- **Showerheads:** Follow the same method as faucets.
- **Toilets:** Note gallons per flush (stamped on the tank or use 1.6 gallons/flush as a standard).

Indoor Fixtures & Appliances: *Please complete water audit log tables for Days 1 through 7, attached at the end of this questionnaire. For capturing all water usage, it may be helpful to place a copy in each bathroom and the kitchen. Extra copies are available at Convention Hall.*

CALCULATING OUTDOOR WATER USE

Flow Rates & Usage Estimation For each fixture or irrigation systems, measure flow rate using the method details above. Due to winter weather conditions, we understand that this component of the audit is more difficult. Please estimate if needed, and indicate with a star (*).

Outdoor Fixtures and Irrigation

Fixture/Zone	Flow Rate (gpm)	Daily Use (min)	Total Daily Gallons
Hose/Sprinklers			
Irrigation System Zone			
Car Washing			
Other (specify)			
Total Outdoor Use			

* **Seasonal Variation** Approximate usage increase in warmer months: _____ gallons/day

Name / Identifier:

WATER USAGE QUESTIONNAIRE

Bathroom Habits

- How many times per day does each person typically shower or bathe?
- What type of shower head do you have? (e.g., standard, low-flow, etc.)
- Do you take baths, and if so, how often and how full is the tub typically?
- Do you have a low-flow or dual-flush toilet?
- Do you let the water run while you brush your teeth or shave?
- Average length of time in the shower?

Kitchen Habits

- How many times per day do you use the sink (for dishes, food prep, etc.)?
- Do you use a dishwasher? If so, how often and is it full when you run it?
- How often do you run the garbage disposal?
- Do you rinse dishes before loading them into the dishwasher, or do you scrape them only?
- Do you use a dishpan or plug the sink when washing and rinsing dishes by hand?
- Do you pre-rinse your dishes prior to loading them in the dishwasher?
- Do you let the water run while you wash dishes or pots; or when you prepare salads and vegetables?

Laundry

- How often do you do laundry?
- What type of washing machine do you have (e.g., front-loading, top-loading)?
- Do you always run full loads, or sometimes partial loads?
- Do you run the clothes washer before it is fully loaded?

Yard and Outdoor Use

- Do you have a garden or lawn? If so, how often do you water it?
- What method do you use for watering (e.g., hose, drip irrigation, pop-up sprinklers)?
- If you use an automatic sprinkler system, is it fitted with a rain sensor? What time of day is it set to run?
- If you have an outdoor hose, do you have an automatic shut-off nozzle?
- What time or times of day do you water your plants?

Name / Identifier:

- Do you have a cistern or rain collecting system?
- Do you use a pool or hot tub? If so, do you fill it yourself or have water delivered? How often?
- How often do you wash your vehicles?

WATER-EFFICIENT DEVICES & PRACTICES

Appliance Use

- Do you use any water-saving appliances or fixtures, such as low-flow faucets, showerheads, or toilets?
- Have you installed a water-efficient washing machine or dishwasher?

Behavioral Habits

- Do you regularly turn off the faucet while brushing your teeth, shaving, or washing dishes?
- Do you shorten your shower times to save water?
- Do you collect water (e.g., from showering or rinsing dishes) for other uses like plants?

Water Leakage & Maintenance

- Have you noticed any leaks in your plumbing (e.g., faucets, pipes, toilets)?
- Are there any appliances that seem to consume more water than expected?
- How often do you check for leaks in your irrigation system?

Leak Detection Assessment

- Inspect faucets, showerheads, and toilets for leaks.
- For toilets, use food coloring in the tank; if color appears in the bowl without flushing, there is a leak.
- For toilets, use food coloring in the tank; if color appears in the bowl without flushing, there is a leak.
- Record observations:
 - Fixture: _____ Leak Rate: _____ (e.g., drips/min or gallons/day)
- Use this formula to calculate waste:
 - Drips per Minute \times 60 \times 24 \div 15,140 = Gallons/Day

Name / Identifier:

DAY ONE

Fixture/Appliance	Flow Rate (gpm/gal/flush)	Daily Use (min/uses)	Total Daily Gallons
Kitchen Faucet			
Dishwasher	9 gallons/load (avg.)		
Refrigerator Water Dispenser			
Bathroom 1 Faucet(s)			
Bathroom 1 Shower(s)			
Bathroom 1 Toilet(s)			
Bathroom 1 Bath			
Bathroom 2 Faucet(s)			
Bathroom 2 Shower(s)			
Bathroom 2 Toilet(s)			
Bathroom 2 Bath			
Bathroom 3 Faucet(s)			
Bathroom 3 Shower(s)			
Bathroom 3 Toilet(s)			
Bathroom 3 Bath			
Bathroom 4 Faucet(s)			
Bathroom 4 Shower(s)			
Bathroom 4 Toilet(s)			
Bathroom 4 Bath			
Washing Machine	41 gallons/load (avg.)		
Other (specify)			
Total Indoor Use			

Name / Identifier:

DAY TWO

Fixture/Appliance	Flow Rate (gpm/gal/flush)	Daily Use (min/uses)	Total Daily Gallons
Kitchen Faucet			
Dishwasher	9 gallons/load (avg.)		
Refrigerator Water Dispenser			
Bathroom 1 Faucet(s)			
Bathroom 1 Shower(s)			
Bathroom 1 Toilet(s)			
Bathroom 1 Bath			
Bathroom 2 Faucet(s)			
Bathroom 2 Shower(s)			
Bathroom 2 Toilet(s)			
Bathroom 2 Bath			
Bathroom 3 Faucet(s)			
Bathroom 3 Shower(s)			
Bathroom 3 Toilet(s)			
Bathroom 3 Bath			
Bathroom 4 Faucet(s)			
Bathroom 4 Shower(s)			
Bathroom 4 Toilet(s)			
Bathroom 4 Bath			
Washing Machine	41 gallons/load (avg.)		
Other (specify)			
Total Indoor Use			

Name / Identifier:

DAY THREE

Fixture/Appliance	Flow Rate (gpm/gal/flush)	Daily Use (min/uses)	Total Daily Gallons
Kitchen Faucet			
Dishwasher	9 gallons/load (avg.)		
Refrigerator Water Dispenser			
Bathroom 1 Faucet(s)			
Bathroom 1 Shower(s)			
Bathroom 1 Toilet(s)			
Bathroom 1 Bath			
Bathroom 2 Faucet(s)			
Bathroom 2 Shower(s)			
Bathroom 2 Toilet(s)			
Bathroom 2 Bath			
Bathroom 3 Faucet(s)			
Bathroom 3 Shower(s)			
Bathroom 3 Toilet(s)			
Bathroom 3 Bath			
Bathroom 4 Faucet(s)			
Bathroom 4 Shower(s)			
Bathroom 4 Toilet(s)			
Bathroom 4 Bath			
Washing Machine	41 gallons/load (avg.)		
Other (specify)			
Total Indoor Use			

Name / Identifier:

DAY FOUR

Fixture/Appliance	Flow Rate (gpm/gal/flush)	Daily Use (min/uses)	Total Daily Gallons
Kitchen Faucet			
Dishwasher	9 gallons/load (avg.)		
Refrigerator Water Dispenser			
Bathroom 1 Faucet(s)			
Bathroom 1 Shower(s)			
Bathroom 1 Toilet(s)			
Bathroom 1 Bath			
Bathroom 2 Faucet(s)			
Bathroom 2 Shower(s)			
Bathroom 2 Toilet(s)			
Bathroom 2 Bath			
Bathroom 3 Faucet(s)			
Bathroom 3 Shower(s)			
Bathroom 3 Toilet(s)			
Bathroom 3 Bath			
Bathroom 4 Faucet(s)			
Bathroom 4 Shower(s)			
Bathroom 4 Toilet(s)			
Bathroom 4 Bath			
Washing Machine	41 gallons/load (avg.)		
Other (specify)			
Total Indoor Use			

Name / Identifier:

DAY FIVE

Fixture/Appliance	Flow Rate (gpm/gal/flush)	Daily Use (min/uses)	Total Daily Gallons
Kitchen Faucet			
Dishwasher	9 gallons/load (avg.)		
Refrigerator Water Dispenser			
Bathroom 1 Faucet(s)			
Bathroom 1 Shower(s)			
Bathroom 1 Toilet(s)			
Bathroom 1 Bath			
Bathroom 2 Faucet(s)			
Bathroom 2 Shower(s)			
Bathroom 2 Toilet(s)			
Bathroom 2 Bath			
Bathroom 3 Faucet(s)			
Bathroom 3 Shower(s)			
Bathroom 3 Toilet(s)			
Bathroom 3 Bath			
Bathroom 4 Faucet(s)			
Bathroom 4 Shower(s)			
Bathroom 4 Toilet(s)			
Bathroom 4 Bath			
Washing Machine	41 gallons/load (avg.)		
Other (specify)			
Total Indoor Use			

Name / Identifier:

DAY SIX

Fixture/Appliance	Flow Rate (gpm/gal/flush)	Daily Use (min/uses)	Total Daily Gallons
Kitchen Faucet			
Dishwasher	9 gallons/load (avg.)		
Refrigerator Water Dispenser			
Bathroom 1 Faucet(s)			
Bathroom 1 Shower(s)			
Bathroom 1 Toilet(s)			
Bathroom 1 Bath			
Bathroom 2 Faucet(s)			
Bathroom 2 Shower(s)			
Bathroom 2 Toilet(s)			
Bathroom 2 Bath			
Bathroom 3 Faucet(s)			
Bathroom 3 Shower(s)			
Bathroom 3 Toilet(s)			
Bathroom 3 Bath			
Bathroom 4 Faucet(s)			
Bathroom 4 Shower(s)			
Bathroom 4 Toilet(s)			
Bathroom 4 Bath			
Washing Machine	41 gallons/load (avg.)		
Other (specify)			
Total Indoor Use			

Name / Identifier:

DAY SEVEN

Fixture/Appliance	Flow Rate (gpm/gal/flush)	Daily Use (min/uses)	Total Daily Gallons
Kitchen Faucet			
Dishwasher	9 gallons/load (avg.)		
Refrigerator Water Dispenser			
Bathroom 1 Faucet(s)			
Bathroom 1 Shower(s)			
Bathroom 1 Toilet(s)			
Bathroom 1 Bath			
Bathroom 2 Faucet(s)			
Bathroom 2 Shower(s)			
Bathroom 2 Toilet(s)			
Bathroom 2 Bath			
Bathroom 3 Faucet(s)			
Bathroom 3 Shower(s)			
Bathroom 3 Toilet(s)			
Bathroom 3 Bath			
Bathroom 4 Faucet(s)			
Bathroom 4 Shower(s)			
Bathroom 4 Toilet(s)			
Bathroom 4 Bath			
Washing Machine	41 gallons/load (avg.)		
Other (specify)			
Total Indoor Use			

Name / Identifier:

(This portion of the survey is provided for your reference.)

SUMMARY OF WATER USE

Total Daily Water Use

- Indoor Use: _____ gallons/day
- Outdoor Use: _____ gallons/day
- **Combined Total:** _____ gallons/day

Comparison to Average

- Compare your household's per-person daily use to regional averages (e.g., 80-100 gallons/person/day).
- Your rank: [] Excellent [] Good [] Needs Improvement

Balance & Cost

Source of Water Use	Gallons per Year (est.)	% of Total	Water Cost (\$/yr)	Sewer Cost (\$/yr)
Domestic				
Outdoor				
Other				
Total:				

Name / Identifier: