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| --- |
| ***Instructions to complete the template for your Water-using Equipment Report****All grey italic text with borders are instructions to help you prepare the required BEST Practice for your building.*1. *Replace all* [blue text in brackets] *in the document with building specific information.*
2. *Where required, complete the necessary tasks, or engage a third-party consultant to complete the tasks so that you are able to fill the relevant sections of the template with building specific information.*
3. *Delete all grey italic text when you have filled all relevant sections with building specific information.*
4. *Complete the Checklist below to confirm your Water-using Equipment Report meets the BEST Practice requirements.*
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| ***Checklist****The Water-using Equipment Report must contain the following elements:* [ ]  *Assessment and list of current performance of water-using equipment*[ ]  *Establish Baseline Consumption*[ ]  *Prioritized list of proposed water conserving measures (WCMs) to enable greater water efficiency*[ ]  *For buildings with no whole-building water meter installed: Completed Water-using Equipment Report conducted within the last five (5) years from the date of current BOMA BEST verification*[ ]  *For buildings occupied fewer than two (2) years with whole-building water meter installed: Completed Water-using Equipment Report conducted within the last two (2) years.* |

**WATER-USING EQUIPMENT REPORT**

[Insert Building Name and / or Address]

[Insert Name of Organization]

[Insert Building Description – number of floors, tenants, parking spaces (underground or surface) and other distinguishing features]

[Insert year building construction was completed]

[Insert date of Water-using Equipment Report]

# Introduction and Purpose

A sound understanding of the building’s configuration and water systems can support proactive water management and facilitate the identification of potential water conserving measures.

# Water-using Equipment Information

[Provide an inventory of water-using equipment in your building, such as

* Domestic water fixtures (faucets, toilets, urinals)
* Water using appliances (dishwasher, washing machine etc.)
* Cooling equipment including cooling towers, equipment “once-through” cooling and customized tenant cooling equipment
* Landscape irrigation equipment
* Humidification equipment
* Heating equipment (boiler blowdown, steam production and condensate management)
* Any other specialized equipment (including production use and process loads)]

*Delete bullets not applicable to your building.*

*Refer to information contained in the building’s Operation and Maintenance Manual, As Built Drawings and Commissioning Report to prepare this inventory.*

# Baseline Consumption

[Indicate the estimated water used by the respective building equipment and systems.

* Domestic water fixtures: [insert estimated annual water used in litres or cubic meters]
* Cooling towers: [insert estimated annual water used in litres or cubic meters]
* Leaks and overflows: [insert estimated annual water used in litres or cubic meters]
* Irrigation System: [insert estimated annual water used in litres or cubic meters]
* Other: [insert estimated annual water used in litres or cubic meters]

|  |
| --- |
| *Delete bullets not applicable to your building.**Reference relevant equipment consumption data from the building automation system and water sub-meters OR equipment performance estimates informed by manufacturer specifications PLUS an estimated calculation of the equipment’s annual consumption, such as:** *Domestic water fixtures:*
	+ *Sinks and faucets: aerator output multiplied by estimation of annual use*
	+ *Toilets and urinals: flush output multiplied by estimation of annual use*
	+ *Showerheads: output of the showerhead multiplied by estimation of annual use*
* *Cooling towers: Estimate make-up water required to compensate for losses due to evaporation, drift and splash-out, leaks and overflow, and bleed or blowdown*
	+ *Evaporation: Directly related to heat transfer and operational management. Assume approximately 1.8 GPH (centrifugal) or 3.7 GPH (absorption) per ton of cooling multiplied by the load percentage.*
	+ *Bleed/blowdown: Losses represent a non-linear function of the concentration cycles (purity of make-up water over the purity of the recirculating water). Higher cycles mean fewer blowdowns are needed.*
	+ *Drift and splash-out: Losses are not significant for well-maintained towers under normal conditions. Assume approximately 0.014 GPH per ton of cooling or about 0.008% of recirculating water.*
* *Leaks and overflows: These are difficult to measure or estimate and losses are not significant in well-maintained towers. Visual inspection for leaks should be performed*
* *Irrigation system: output of the sprinklers multiplied by operating hours*
* *Other: tenant uses (dishwashers or gyms), large process loads, or any other out-of-the-ordinary use unique to your building.*
 |

# Recommended Water Conservation Measures

Refer to the attached **Appendix** that shows the WCMs identified and basic estimates of financial savings the building owner may realize because of investing in WCMs.

*If appropriate, explore the possibility of installing sub-meters for the cooling tower make-up line and other major water consuming equipment.*

*For buildings with no whole-building water meter installed: Explore feasibility of installing a base building meter if not present.*

# Conclusion

[Insert recommended next steps and closing statements. Sign and date document.]

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[Insert name and signature of person responsible for preparing the Water-using Equipment Report]

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[Insert Date the Water-using Equipment Report was completed]

Appendix: Water Conservation Measures and Financial Savings Estimate

*Insert a prioritized list of the retrofit and operation and maintenance water conservation measures (WCMs) identified. Explore the possibility of installing sub-meters for large water-using tenants.*

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| **Potential Water Conservation Measure** | **Estimated Implementation Cost ($)** | **Estimated Incentive Amount** (if applicable) **($)** | **Estimated Net Capital Cost ($)** | **Estimated Annual Water Use Savings** (m3/m2/yr) | **Estimated Annual Cost Savings ($)** | **Estimated Payback Period (Years)** | **Notes** |
| *Example: Replace existing toilets with 6LPF models* | *Est. $300 per unit excl. installation* | *n/a* | *$137,700* | *7,269* | *15,266* | *9.0* |  |
| [Add for your building] | [Add] | [Add] | [Add] | [Add] | [Add] | [Add] | [Add] |
| [Add for your building] | [Add] | [Add] | [Add] | [Add] | [Add] | [Add] | [Add] |