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SOP: Monitoring and Managing Water Use in Hotels WITHOUT Water Meters

Purpose:
Monitoring is the first step toward reducing water use in your hotel. It helps you see which parts of your operations use the most water and where savings might be easiest to achieve. It also gives you a clear view of whether your water-saving initiatives are making a difference and to what extent. Importantly, regular monitoring can quickly highlight unexpected leaks, which are often responsible for significant water loss.

Why this matters:

The purpose of this SOP is to support water-saving efforts in hotels that lack a full metering infrastructure by using estimates, operational tracking, and team involvement to monitor water use, detect leaks and inefficiencies, and guide practical improvements.

Step 1: Estimate Total Water Use Based on Occupancy and Operational Activity

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Establish a water use baseline using available data:

- Start by reviewing monthly water bills or delivery records to determine average total consumption.
- Calculate guest nights and divide water consumption per guest night to obtain average consumption data
- Use benchmarks relevant to your destination such as litres per guest night depending on hotel category and its facilities to determine your performance compared with similar properties in your area

Record daily and weekly indicators to track water-related activity:

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- Occupancy rates
- Laundry loads (kgs or number of cycles)
- Number of meals served (kitchen output)
- Irrigation and garden watering schedules
- Pool top-ups or backwash cycles

Use logs to capture data consistently:

- Create a simple table or logbook that tracks these activities.
- Aim to identify patterns and establish a baseline for ‘normal’ water use.

Refine the estimate over time:

- Compare recorded activities to changes in water bills or tank refills.
- Adjust your estimated usage per activity as patterns become clearer.

Step 2: Track Water Bills and Delivery Volumes

Set up a central water tracking file:

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- Collect all water bills (municipal or private) and delivery receipts.
- Create a spreadsheet to track monthly usage volumes and costs over time.

Log key information monthly:

- Volume consumed (in m3 or litres)
- Cost per unit of water
- Total spend
- Source (e.g. borehole, municipal supply, tanker delivery)

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Identify trends and anomalies:

- Look for sudden increases in volume or cost that may suggest leaks or operational changes.
- Relate usage to occupancy levels and seasons.

Visualise data:

- Use graphs or charts to show trends over several months.
- This helps make patterns clear and can be shared easily with staff.

Step 3: Monitor Key Water-Intensive Activities

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Identify your main areas of water use:

- Laundry
- Kitchen
- Pool and garden maintenance
- Room cleaning (showers, toilets, amenities)

Create manual logs for each area:

- **Laundry:** number of cycles per day/week, machine load sizes
- **Kitchen:** number of meals served, dishwasher cycles
- **Housekeeping:** frequency of towel/linen changes including pool towels
- **Garden:** watering schedule (frequency, duration, manual or automated)
- **Pools:** water top-up frequency and estimated volume

Use logs to spot inefficiencies:

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- Compare week-to-week data
- Monitor spikes or irregularities

Involve staff in daily or weekly tracking:

- Provide simple forms or checklists
- Assign staff responsibility for updating logs

Step 4: Measure Flow Rates at Key Fixtures

Measure key fixtures in a sample of rooms and spaces:

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- Taps in handwashing basins and bidets (Ideal 5 litres or less per minute)
- Showers (Ideal 10 litres or less per minute)
- Toilet flushes (Ideal is no more than 6.5 per full flush)
- Urinals (Ideal is 2 litres per flush or less)

Note: Bath taps aren't usually worth measuring, as most guests who decide to take a bath will fill it regardless of the flow rate. That said, if the flow is especially slow, it might discourage some guests from running a bath at all.

If you do not have a flow-rate measurer, use a flow rate testing method instead:

- Use a container of known volume (e.g. 1-litre jug)
- Time how long it takes (in seconds) to fill the container from each water outlet
- Convert the results to litres per minute (litres/min) (e.g. if the 1-litre jug fills in 10 seconds, then the flow rate would be 6 litres per minute.)

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Document flow rates by room type or zone:

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- Compare across different rooms and fixture types to spot unusually high rates or inconsistencies. Sometimes due to pressure, the flow rate can be higher from outlets that are situated close to water tanks as the water has less distance to travel. Depending on where water tanks are situated, gravity may also impact the flows as will the location of supporting water pumps.
- Document flows regularly, at least annually as some aerators and flow restrictors become less efficient over time and need removal for cleaning or replacement.

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Take corrective action:

- Adjust flows by opening or closing the water shut-off valves located underneath the sink
- Install aerators or flow restrictors
- Replace or repair high-flow fixtures
- Monitor for improvements after the intervention

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Step 5: Encourage Staff to Observe and Report Water Waste

Train staff to spot signs of water waste:

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- Dripping taps
- Continuously running or refilling toilets
- Damp patches near pipes or walls
- Pool overflow or leaks

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Create simple systems for reporting:

- WhatsApp groups (take care with WhatsApp groups - messages can easily be missed and employees should not receive work-related messages to their personal mobile telephones)
- Maintenance logbooks
- Daily staff briefings or whiteboards

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Empower all departments to participate:

- Housekeeping, kitchen, maintenance, food & beverage, spa and reception teams can all contribute
- Recognise and act on their feedback promptly

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Foster a culture of shared responsibility:

- Reinforce that saving water benefits everyone — operationally and environmentally

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Step 6: Detect Leaks Without Sub-Meters

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Monitor overnight water usage:

- Check tanks or water levels last thing at night and again in the early morning
- Unexpected drops may suggest leaks

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Cross-reference billing data and activity logs:

- Sudden increases in monthly water costs without a rise in occupancy may indicate hidden leaks

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Use visual inspections regularly:

- Conduct weekly walk-throughs of back-of-house and garden areas
- Look for pooling water, soft ground, or wet walls

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Pay close attention to toilets:

- Silent leaks can be costly
- Toilets are often the largest source of hidden water loss. Equip staff and guests to report these issues urgently and ensure prompt repair. The Housekeeping Water Reduction Checklist is quick and easy to implement.
- Use dye tablets or food colouring in cisterns to check if water seeps into the bowl without flushing

Step 7: Review and Improve

Monthly:

- Summarise activity logs and water consumption (from bills or deliveries)
- Compare with occupancy and operational activity
- Note any irregularities, improvements, or concerns
- Share findings with department heads

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Quarterly:

- Review flow rate data and make updates where needed
- Evaluate the impact of any water-saving measures implemented
- Adjust procedures and staff responsibilities if gaps are found

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Annually:

- Review total water use and cost over the year
- Calculate estimated litres per guest night for better benchmarking
- Set realistic water-saving targets for the next year
- Identify areas for low-cost upgrades or behaviour-change initiatives
- Use the review process to build support for future investment in sub-meters or digital monitoring systems