

Practice to be assessed and included in the Guidelines

**Number/code:** OM/SM2

**Title:** DRY URINALS AND RENOVATION OF URINAL FLASHING

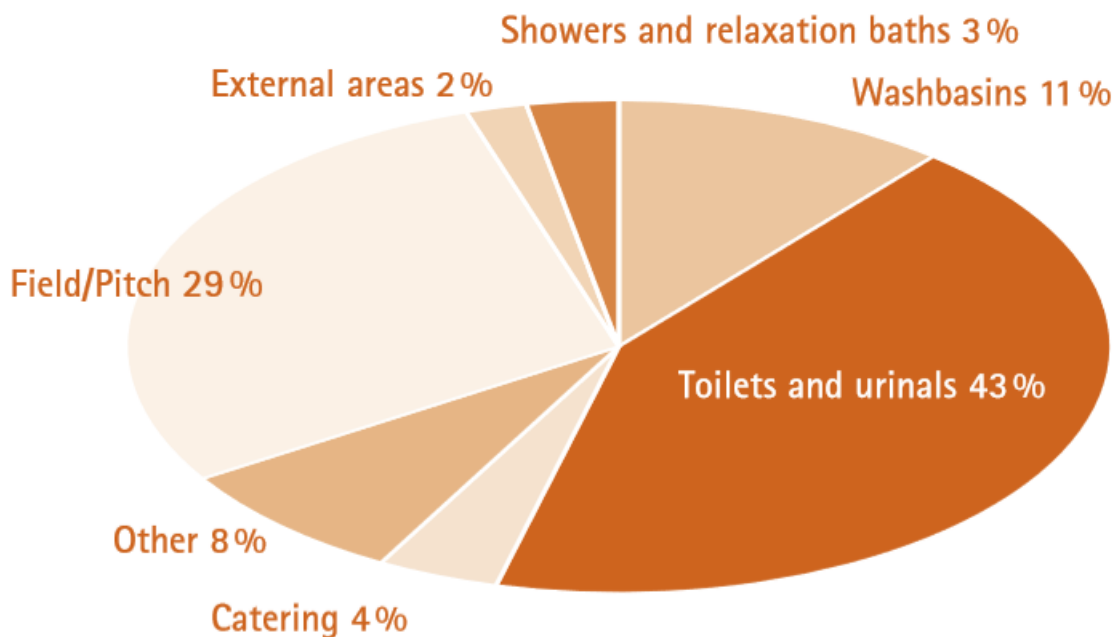
**Guidelines section:**

<input type="checkbox"/>	Governance	<input checked="" type="checkbox"/>	Operational management
		<input type="checkbox"/>	Context of the event
		<input type="checkbox"/>	Event
		<input checked="" type="checkbox"/>	Stadium management
		<input type="checkbox"/>	Procurement
		<input type="checkbox"/>	Mobility and logistics

**Description:**

Considerable quantities of potable and wastewater can be saved at comparatively low cost through the use of water-saving fittings and devices. The choice is great: dry urinals, water saving showers and toilet flushing, water-flow regulators on taps, self-closing taps on washbasins, economical dishwashers. Many of these can be easily retrofitted in existing sports facilities.

*Water consumption of selected World Cup stadiums in Bundesliga operations  
(Source: Green Goal Legacy Report 2006)*



- 1) Ever since it was built, the Volkswagen arena in Wolfsburg has had over 230 water-free urinals in spectator zones. Due to the overwhelmingly positive experiences of this action, they changed over to dry urinals in other areas of the arena (including the business sector, executive boxes, administrative areas and changing rooms). Furthermore, those above-mentioned areas should have also been fitted with water-saving devices (some with sensors).
- 2) The 1994 German Gymnastics Festival in Hamburg set a milestone for the economical usage of water in the world of sport. Around 100,000 athletes traditionally stay overnight during the event in sports halls and schools. The city of Hamburg took this opportunity to modernize sanitary facilities in more than 200 schools. As a result, a great deal of potable water was saved and modernization soon paid for itself. At the same time, the water-saving gymnastics championships encouraged the education authority to re-equip sanitary facilities in other schools in the Hanseatic city.
- 3) During FIFA Men World Cup Germany 2006 the protection of resources of potable water was carried out through the building of rainwater cistern in stadiums in Berlin, Frankfurt, Nuremberg and Stuttgart. Four of the twelve World Cup stadiums installed dry urinals, and in many others water-saving sanitary fittings were installed. In Berlin, Frankfurt and Munich, additional rainwater infiltration systems were built to promote a near-natural water cycle. Further measures for the purposes of modern rainwater management were carried out, including the descaling of land, the water-permeable paving of open spaces and the greening of roofs. The result of these measures was that stadium demand for potable water decreased by 18%.
- 4) The USTA Billie Jean King national tennis center, is an American stadium complex and home of the US Open Grand Slam tennis tournament, among others, some green initiatives related to the use of waterless urinals and ultra-low-flow faucets.
- 5) The Hamburg stadium has renovated its urinals flushing system outside the stadium. The central urinal flushing was replaced by 16 separate steering units and 26 lighting groups. This enables individual toilets to be used and cleaned on their own. Previously, 25 lighting groups and 14 urinal flushing groups could only be activated simultaneously by means of a switching command, which entailed water consumption of 6 m<sup>3</sup> per hour during usage and cleaning. Hamburg stadium estimated to save at least 2,500 m<sup>3</sup> of fresh water, 2,500 m<sup>3</sup> of waste water and 8,120 kwh of electricity per year.
- 6) One of Los Angeles STAPLES Center's more impressive environmental initiatives was the replacement of the arena's 178 waterflush urinals with waterless urinals in 2008. Before 2008, each of the STAPLES Center's urinals consumed 44,000 gallons of water a year. The 178 Falcon waterless urinals that replaced flush fixtures save more than 7 million gallons of water per year and about \$28,200 annually (\$2,350 per month) in direct water costs, not factoring in sewer charges and any other municipal taxes. Each urinal saves roughly 4.5 hundred cubic feet of water per month. Maintenance mainly includes routinely flushing out the pipes and replacing cartridges. They work perfectly and they don't have stoppages like they used to with the standard flush urinal. Continuous training of staff about the upkeep of the urinals has contributed to this success.

7) The MetLife Stadium. Thanks to a partnership with the Environmental Protection Agency (EPA), environmentally friendly materials and practices have been incorporated into New York's MetLife Stadium.

More specifically, water reduction initiatives at the MetLife stadium include, among others:

- Waterless Urinals in men's restrooms save 24 million gallons of water per year.
- Low-flush toilets save almost 2 gallons of water per flush.
- Sensored & metered faucets reduce water demand and conserve potable water with low flow restrictors.
- Low-flow showerheads in the locker rooms use less than half the amount of water per minute of conventional showerheads.

8) The Rabobank Arena in Bakersfield, California, replaced 516 toilets, urinals, faucets and shower heads, saving about one million gallons of water a year.

### **Environmental benefits:**

As shown in the examples above, this practice allows to reduce the consumption of fresh water.

### **Economic benefits:**

For Volkswagen Arena, in financial terms we are looking at savings of 4,200.00 € per annum after investment costs of 30,000.00 € to switch to dry urinals. The investment should therefore pay for itself after seven years.

In the STAPLES arena, the 178 waterless urinals that replaced flush fixtures save more than 7 million gallons of water per year and about \$28,200 annually (\$2,350 per month/roughly 4.5 hundred cubic feet of water per month) in direct water costs.

In general, these no-water urinals typically cost less to purchase and less to install. That's because there is no need to plumb the fixture for water and there are no flush handles, manual or sensor-controlled, to purchase or repair<sup>1</sup>.

### **Applicability and replicability potential**

The measure could be replicated in every stadium.

### **Source**

[Women Football World Cup Germany 2011](#) (p. 31)

[USTA Centre](#)

[FIFA Men World Cup Germany 2006](#) (pp 12, 43-48)

[Guidelines of French Ministry of Sport](#) (p.14)

[FIFA World Cup Russia 2018](#)

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<sup>1</sup> <https://www.waterless.com/blog/stadiums-look-for-ways-to-stop-flushing-water-down-the-drain>

[UEFA](#) (p. 96)

[NRDC - STAPLES Center](#)

[Met-Life stadium water conservation](#)