

WaterSense® Labeled High-Efficiency Lavatory (Bathroom Sink) Faucet Specification

How did WaterSense set the specification for high-efficiency lavatory (bathroom sink) faucets?

EPA industry and product research, as well as the American Society of Mechanical Engineers (ASME) A112.18.1/Canadian Standards Association (CSA) B125.1 standard for Plumbing Supply Fittings, form the basis for the WaterSense lavatory—or bathroom sink—faucet specification. In developing the specification, EPA collaborated with interested parties representing industry, water utilities, and water-efficiency advocacy groups. The WaterSense lavatory faucet specification sets the maximum flow rate of lavatory faucets and faucet accessories at 1.5 gallons per minute (gpm) tested at a flowing pressure of 60 pounds per square inch (psi) (common water pressure in most households). It also includes a minimum flow rate of 0.8 gpm tested at a flowing pressure of 20 psi to ensure performance across a variety of different household conditions.

What types of products can earn the WaterSense label under the High-Efficiency Lavatory Faucet Specification?

Provided the products meet the WaterSense specification, lavatory faucets (i.e., bathroom sink faucets) and lavatory faucet accessories (e.g., aerators, laminar flow devices) can be certified to meet EPA criteria labeled under this specification. This specification applies to bathroom sink faucets or faucet accessories intended for private use, such as in resi-

dences or in private restrooms in hotels and hospitals. Faucets that are not eligible to earn the WaterSense label under this specification include metering faucets (those that dispense a pre-determined volume of water or operate in the “on” position for a pre-determined period of time); bathroom sink faucets intended for public use (those found in office buildings, restaurants, airports, and stadium restrooms, etc.); and residential kitchen sink faucets.

What is a lavatory faucet accessory?

A lavatory faucet accessory is a device that can be added to or removed from a bathroom sink faucet (typically, it screws onto the tip of the faucet spout). Faucet accessories frequently serve as the flow control mechanism that determines if a faucet meets the minimum and maximum flow rate requirements of the WaterSense specification. Faucet accessories control flow rate either through flow restriction—narrowing the opening through which the water is discharged from the faucet—or flow regulation—adapting the width of the opening through which the water is discharged from the faucet based upon fluctuations in water pressure to maintain a constant flow rate. Faucet accessories include:

- Aerators—add air into the water stream to increase the sensation of flow (this is the most common type of accessory).
- Laminar flow devices—force the water through small openings to produce dozens of parallel water streams, creating a more uniform flow and potentially reducing splash.

- Other types of flow restrictors—control flow through means other than aerating the water stream or creating laminar flow.
- Other types of flow regulators—control flow through means other than aerating the water stream or creating laminar flow, but also compensate for changes in water pressure.

Consumers can purchase faucet accessories separately from bathroom sink faucets, and can easily replace existing accessories that do not meet the WaterSense specification. Faucet accessories can be purchased at retail locations and typically cost only a few dollars.

Are bathroom sink faucets that meet the WaterSense specification more expensive than other bathroom sink faucets?

Most bathroom sink faucets on the market today control flow rate with a faucet accessory, thus, adapting new bathroom sink faucets to meet the requirements of the specification can be as simple as switching to a high-efficiency faucet accessory. Most high-efficiency faucet accessories that restrict flow are no more expensive than their conventional counterparts. However, pressure-compensating faucet accessories that are designed to provide and maintain a constant flow rate despite fluctuations in water pressure typically cost a few dollars more.

How much water will I save by replacing my faucets with WaterSense labeled faucets or faucet accessories?

WaterSense anticipates that bathroom sink faucets and faucet accessories with maximum flow rates of 1.5 gpm, as well as certain 1.0 gpm pressure-compensating faucets and faucet accessories, will meet the requirements of the specification. A high-efficiency bathroom sink faucet flowing at 1.5 gpm can reduce flow rate by 32 percent over a traditional faucet with a maximum flow rate of 2.2 gpm. A

faucet flowing at 1.0 gpm can reduce flow rate by 45 percent over a traditional faucet with a maximum flow rate of 2.2 gpm.

Retrofit studies conducted in Seattle, Washington, and East Bay Municipal Utility District in California have shown that a household can save approximately 570 gallons per year by simply replacing existing bathroom sink faucet aerators with high-efficiency 1.5 gpm aerators.

How does the specification ensure I will be satisfied with my faucet's performance?

User satisfaction is very subjective. WaterSense selected this specification's maximum and minimum flow rates with user satisfaction and water efficiency as its top two goals. Reducing the maximum flow rate from the current federal standard of 2.2 gpm to 1.5 gpm ensures both increased water savings and that the faucet flow rate will continue to meet the needs of the user. According to faucet manufacturers and industry experts, reducing a faucet's maximum flow rate from 2.2 gpm to 1.5 gpm is not very noticeable for most users in most situations. In general, the most noticeable difference may be increased wait times when filling the basin or waiting for hot water. By including a minimum flow rate of 0.8 gpm (tested at a flowing pressure of 20 psi), WaterSense ensures that user satisfaction in areas with low water pressure, such as in homes with private wells, will not be significantly impacted.

How does the WaterSense specification ensure that my faucet will perform as it is expected?

To earn the WaterSense label, all faucets and faucet accessories must comply with all the current industry standards regarding quality of materials and performance. In addition to these industry standards, all WaterSense labeled products must be independently certified by a third party licensed product certifying body to confirm that the product meets WaterSense criteria for efficiency and performance.