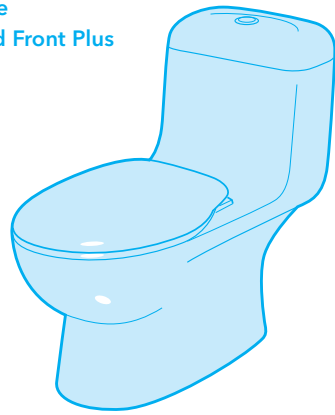


Caroma Caravelle
One-Piece Round Front Plus
Dual-Flush Toilet



\$500 / Vitreous china bowl and tank /
Two-button flush / 0.8 or 1.6 gallons
per flush / caromausa.com

Expert Opinion: As an architect, I've specified quite a few Caroma toilets, and overall I've been happy with them. They're pretty efficient, and effective as well. I prefer the cleaner look of the wall-mounted models, but they do require more work to frame in. The floor-mounted ones could look a little better in the design department, but it's a relatively easy job to tear out

your existing toilet and install one, so I think Caroma is on the right path.

What We Think: Of those reviewed, the floor-mounted Caravelle most resembles an old-school single-flush toilet, which could make first-time eco-toilet customers more comfortable with taking the dual-flush plunge. This type of toilet—with its push-button operation, efficient use of water, and simple installation—should represent the minimum threshold of sustainability met in residential bathrooms today.

Throne Off Course

Victorian technology has no business being the receptacle for your business. It's time to outmode the common commode.

From the gong farmers of Tudor England, to the night-soil collectors of early 20th-century China, to the porcelain gods prayed to daily throughout the modern Western world, the indelicate matter of bodily waste disposal has been marked by a common philosophy: Out of sight, out of mind. And in the view of architect, writer, and environmental evangelist Jason F. McLennan, that really stinks.

"For the last 100 years, we've basically done everything wrong. The toilet is simply a receptacle on one end of a huge chain of stupidity created in a misguided effort to protect the public from disease and embarrassment," he explains. "By using water to convey waste over long distances to industrial treatment facilities, we've committed two great environmental

sins. One, we've polluted our water supply: Huge amounts of energy and toxic chemicals are required to make it clean again. Two, we've become the only species on Earth that disrupts nature's nutrient cycle because we destroy those found in our waste. An entire industry has arisen just to replace them."

Assuming that a dual-flush system (which allows users to moderate water usage) represents the eco-toilet baseline, then a waterless, nutrient-preserving composting toilet is undoubtedly the Holy Grail. It was McLennan's passion for the topic—and his email handle of "Green Warrior"—that led us to enlist his expertise in reviewing a variety of eco-toilet contenders poised to usurp the single-flush throne.

A Note on Our Expert:

Jason F. McLennan is CEO of the Cascadia Region Green Building Council, the Pacific Northwest's leading organization in the field of sustainable development. He's the author of the Living Building Challenge—an international green building program—and cocreator of Pharos, an advanced building material evaluation system. A former principal at BNIM Architects, McLennan is recognized as a leader in the green architecture movement and has lectured extensively on the subject of sustainability throughout the United States and Canada. He has written three books—including the widely read *The Philosophy of Sustainable Design*—and is the founder and CEO of Seattle, Washington-based Ecotone Publishing. ▶

Story by Michael Grozik
Portrait by Andy Reynolds
Illustrations by Jason Lee



**Clivus Multrum
Foam-Flush Toilet**



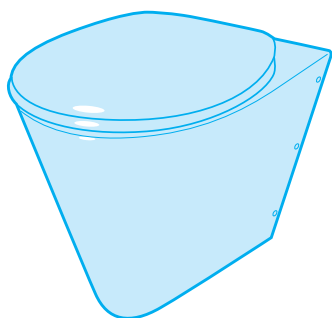
\$2,500 / Vitreous china bowl and water tank / Push-button flush / 3 ounces per flush / clivusmultrum.com

Expert Opinion: A foam-flush toilet offers the best of both worlds. It uses an incredibly small amount of water per flush—just enough to get things down the drain and to give you that reassuring sense that the bowl is getting a good rinse. Plus, the water nutrient remains part of the composting process, so it’s actually a beneficial—rather than a “less bad”—technology.

I think the Clivus Multrum is an excellent option and highly recommend it.

What We Think: The Clivus Multrum relies upon gravity to transfer three ounces of soapy water (and waste) per flush to an external composting unit, which must be installed downgrade from the bowl. Because of this, it’s best suited for new construction rather than remodels. Considering that it’s essentially a souped-up version of a standard composting toilet, its looks hold up fairly well in comparison.

**Neo-Metro miniLoo
Compact
Dual-Flush Toilet**



\$1,210-\$1,794 / Stainless steel or white powdercoat finish bowl / Two-button flush / 1.0 or 1.6 gallons per flush / In-wall flush system sold separately / neo-metro.com

Expert Opinion: There’s no excuse for a single-flush toilet anymore—as with compact fluorescent bulbs, people should be using dual-flush toilets or nothing. The miniLoo is really cool looking; it has some very nice options. From a water-usage standpoint, they could’ve done better. But if its design

gets people to transition from a single flush to a dual, then it’s succeeded on a certain level.

What We Think: Dual-flush toilets have long been the norm in Europe, but only recently have viable options been available to customers in the United States. Of these, the Neo-Metro line is easily one of the most attractive. Though a stainless steel prison toilet is rumored to have helped tank Brad and Jen’s marriage, we find the mini-Loo’s cell-block austerity appealing.

**Sun-Mar
Self-Contained Compact
Composting Toilet**



\$1,595 / Fiberglass bowl and body / Electric composting bio-drum / sun-mar.com

Expert Opinion: Environmentally, an all-in-one composting toilet is the best option—it’s akin to buying an electric car instead of a gas-guzzler. A composting toilet is completely disconnected from the sewage system and produces useful nutrients that you can spread on your garden. What bugs the hell out of me, though, is that the most sustainable option is often

the least attractive, and that’s a huge barrier to public acceptance. We really need Apple to redesign things like this.

What We Think: We agree that the Sun-Mar isn’t exactly sexy—and that better industrial design would lead to more widespread adoption—but we probably shouldn’t expect the release of an iPoo anytime soon. However, as far as self-contained composting toilets go, this one is considerably smaller and more inviting than other clunky behemoths now on the market.

**Sancor Envirolet VF 700
Composting Toilet**



\$3,999 / Vitreous china bowl / External composting unit / Vacuum-assisted flush / envirolet.com

Expert Opinion: This model has a nice modern bowl, and if the architecture allows for it, installing the composting unit in a separate location is definitely preferable. The vacuum function worries me a bit from a maintenance perspective, and it requires some electricity—albeit not much— to run. Having a suction hose down there makes me nervous, though!

What We Think: The Envirolet line—which allows for the composting unit to be installed in the wall behind the bowl or in the floor beneath it—offers a more streamlined and approachable toilet than its bulkier all-in-one cousins. Dual-intake fans draw down odors while simultaneously increasing aeration, evaporation, and microbic activity, resulting in more effective composting. Unfortunately, these features come at a price that many might find hard to stomach. ■■■