

**Terry Love's report on low-flow toilets for consumers**, the ones that work! Below are my recommendations for toilets that work in today's world. find out which water efficient gravity, flushmate assisted, pf/2, whispervac, g-max toilets that work. new and updated reports from the plumbing field. **Please wait a few seconds more for the page to load.**



## Terry Love's consumer toilet reports

### A report on low flow water efficient toilets



*Terry Love*

**Terry Love**  
**Redmond WA**

**Save time, and money.** Find out which toilets work in today's world. Despite complaints of poor working toilets, these toilets, in this report have been proven by plumbers to work! Yes, they work just fine in spite of the current standards which allow for a maximum water usage of 1.6 gallons

per flush (GPF).

The new lower flow toilets have been mandated to save precious and limited resources. For those of us that had grown used to 7.0 GPF toilets, it comes as a shock. The first recent evolution in toilets came with the 5.5 GPF, then the 3.5 GPF, and now 1.6 GPF.

"Switching to water-efficient plumbing fixtures could save the average household as much as \$50 to \$100 a year on water and wastewater bills." George Whalen

"Because of the new low-flow toilets, Americans save \$11.3 million everyday on their water bill " David Goike

With the changes in the water usage laws of 1992, many encountered plumbing problems. The first round of low-flow toilets were not quite ready for prime-time. Customer complaints were many and plumbers were in the bad position of installing products that nobody wanted to use. Recently, in the wonderful world of plumbing, things have changed with new and updated products. Some of the new plumbing products work better than the old



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**(425) 649-LOVE**

(425) 649-5683

fax 644-4518

[Shopping](#)

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[Gerber](#)

847-675-6570

[Briggs](#)

800-888-4458

[Caroma](#)

562-439-9224

[Crane](#)

800-877-6678

[Duravit](#)

888-DURAVIT

[Eljer](#)

800-423-5537

[Fluidmaster](#)

949-728-2000

[Kohler](#)

920-457-4441

[Mansfield](#)

419-938-5211

**Saniflo**  
800-363-5874

**Sterling**  
800-Sterling

**St. Thomas  
Creations**  
800-536-2284

**Toto toilets**  
East 888-295-8134  
West 800-877-1541

**Terry's shopping  
cart for Toto**

**American  
Standard**  
800-524-9797

**Universal Rundle**  
800-955-0316

**Western**  
562-529-6560

**Zoe Washlet**



**Panasonic Intimist  
Bidet seats**

**Daelim bidet seat**

**Sloan Flushmate**  
800-533-3460

**W/C Technology  
Corporation**  
a MASCO Company  
888-732-9282

**Composting  
Toilets**

water wasters. The purpose  
of this report, is to identify  
which products are:

**"Doing the job!"**

**Below are my recommendations for toilets that work in today's  
world.**

FM=[Flushmate](#), G=Gravity, GM=[G-Max flushing](#), [PF/2](#),  
WV=[WhisperVac](#), RF=round front, EL=elongated

Toilet	Notes	Flush	Price
 Toto <a href="#">Drake CST744S</a> EL  Toto Drake <a href="#">CST744SL</a> EL Handicap height ADA	Commercial Grade flush, Quiet	<a href="#">GM</a>	239
			319
 Toto <a href="#">UltraMax</a> <a href="#">#MS854114S</a> one piece EL one piece RF	Commercial Grade Class four Quiet. Powerful flush, some bowl wash, Consumer friendly. Who needs a	<a href="#">GM</a>	379
 Gerber, <a href="#">Ultra Flush</a> <a href="#">#21-302</a> RF EL Handicap 17" high	Does the job! powerful flush, some bowl wash, noise may startle, but less than before.	<a href="#">FM</a>	279 299 320
Universal Rundle, <a href="#">Amege #4061</a>	good value, noise may startle, but less than before.	<a href="#">FM</a>	279
Gerber <a href="#">Maurice #21-012</a>	One piece with Flushmate.	<a href="#">FM</a>	695
American Stand. RF, <a href="#">#2172.100</a> <a href="#">Cadet PA</a> American Stand. EL	Good quality, noise may startle, but less than before.	<a href="#">FM</a>	300 332
American Standard, <a href="#">Fontaine</a> <a href="#">#2042.417</a>	One piece, noise may startle, but less than before.	<a href="#">FM</a>	741
Crane <a href="#">Economiser 3-804</a> EL	Good flush, noise may startle, but less than before.	<a href="#">FM</a>	279
 Toto <a href="#">Carlyle</a> <a href="#">#MS8741114S</a>	Concealed trapway <a href="#">adjustable to:</a> <a href="#">10" - 12" - 14"</a> low initial noise	<a href="#">GM</a>	469

**Envirolet**

USA 800-387-5126  
CDA 800-387-5245

**BioLet**

800-5BioLet

**Clivus Multrum**

1-800-4-clivus

**Dual Flush Toilets  
Malaysia**

**GBH ceramic**

238 Jalan  
Segambut, 51200  
Kuala Lumpur,  
Malaysia

**Electric  
Incinerating  
Toilets**

**INCINOLET  
Products**

a 1-800-527-5551

**Australia**

**Parex Industries**  
fax (03) 95438535

**Water Engineering  
and information**

**Aquacraft, Inc.**

Water Engineering  
and Management  
303-786-9691

**WaterWiser**





Denver, CO 80235  
800-559-9855

**Seattle  
Water Study**

**OneTwoFlush, Inc.**

800-876-9905

**Prison Ware  
Acorn Engineering**

	Toto <a href="#">Ultimate #MS854114</a> one piece EL	class three, Quiet	PG	319
	Eljer <a href="#">Berkeley 081-1595</a> EL	Good flush, less noise	G	420
	Western, <a href="#">Clinton #832 EL</a> Aris #822 RF Handicap #872	good flush good bowl wash less noise	G	125 99 189
	Mansfield, <a href="#">Quantum #150-1</a> EL	noise may startle, but less than before.	<a href="#">FM</a>	279
	New Cadet EL, <a href="#">2898.012</a> (new model)	Performs well	G	174
	Toto, <a href="#">#CST 703</a> RF Toto <a href="#">#CST 704</a> EL	good value	G	99 120
	American Standard <a href="#">Savona #2095.012 RF</a>	good looking 1 piece quiet	G	445
	Kohler, Rosario <a href="#">#K3434</a> RF	great looks	G	370
	Gerber, <a href="#">#21-702 RF</a> <a href="#">#21-712 EL</a> <a href="#">#21-718 ADA handicap</a>	good value good flush, average bowl wash.	G	99 135 187
	St. Thomas Marathon RF	Good flush	G	99
	Caroma <a href="#">Caravell 305</a> Washdown	Dual flush	G	320
	American Standard, <a href="#">Cadet II RF, #2164.135</a> American Standard, <a href="#">Cadet II Elongated</a> American Standard <a href="#">10" RF Rough In</a>	Nice looks	G	141 170 188
	American Standard, <a href="#">Hydra #2116.016 RF</a>	Builder model	G	125

If you ask plumbers about toilets, you will get different answers depending on what is available in their part of the country. I have asked plumbers to write in with the latest information as it happens in the field. [toilets@psbl.com](mailto:toilets@psbl.com)

For many plumbers, the pressure assist toilets are the way to go, with brands like Gerber and American Standard leading the way. Most of the assisted toilets use the [Sloan Flushmate](#). Note: Small children may be startled by the sudden action of the Flushmate equipped toilets.

**Company**  
800-488-8999

**Metcraft**  
800-444-9624

**Airbus Lav  
Module**

**Sewage Ejectors**

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My favorite toilet is the [UltraMax](#) by Toto. Toto calls this a "Power-Gravity" toilet. The model number is MSS854114S. It is a good looking one-piece that incorporates a 3" flush valve instead of the standard 2". The [fill valve](#) can be found in any hardware

store. It meets commercial requirements, works well in a home and is quieter than the air assisted models.

Some parts of the country that have poor water quality (sand, rocks, ect.) work better with gravity toilets. (non-assisted toilets flush using gravity) Some of the gravity toilets work very well with one flush. Excellent are the Toto [Drake](#) and [Ultramax](#) series. Good are the [Gerber](#), [Toto](#), St. Thomas and [Western](#) toilets.

Briggs has a model called the [Vacuity](#), that uses the WhisperVAC flushing system. ([WhisperVac](#) is a patented vacuum assist) The water surface area is 10"x12".



Handicap style toilets with the higher bowl height (17" instead of 15") seem to perform better than the standard height toilets.

Some of the low flow toilets, such as the Kohler Rialto have little water in the bowl. Low water depth prevents the waste from dropping below the water line. A toilet that has good water depth, will prevent "outhouse smell".

### **A few comments sent to me by other plumbers:**

"I used to have these same problems with the 1.6gal toilets. Time to tell the customer to bite the bullet and get a new **Western, TOTO** or one of the other brand toilets that work! Since switching several of our customers to [Western](#) and [TOTO](#) we no longer have the standard call backs on toilets that don't flush." *Moshe Levine, [Levine Plumbing and Const.](#) Tonasket, WA*

"I think the **Toto** is one of the big trade secrets out there." *Rod Lampert, [Lampert Plumbing Co.](#) Phoenix, Arizona*

["The Metropolitan Water District of Southern California](#) has co-funded the replacement of about 1.5 million 3.5, 5.0 and 7.0 gallon toilets in their service area. Through that process, the District Water Conservation Staff have come to learn which units are the best performers and are rated the highest by residential customers. Of the 1.5 million, most are at the low end of the cost spectrum so Metropolitan's experience does not extend to some of the higher priced models that you report. The American Standard [Cadet](#) and

[Toto CST703](#) units are ranked by everyone as superior performers and the ones water agencies and their customers like the best. The flush well and customer complaints are nil." John Koeller, P.E.

"**American Standard #1**", *Jim Rauer, [Kish & Rauer Plumbing & Heating, Inc](#) Highland, Indiana.*

"**Gerber**, is our entry level, garden variety, everyday toilet. They are well made, look good, and they actually work." *Craig McGill, McGill Plumbing Inc. Largo FL*



If a client asks me, which brands have the most variety in styles and models, I point out **Kohler** and **American Standard**

Below are some quotes from Fine Homebuilding, [Oct/Nov 1997](#) that may amuse owners of the early 1.6 toilets.

[Terry Love](#) of [Love Plumbing & Remodel](#) in Redmond, Washington, says, "Most customers who get 1.6-gal. toilets for the first time have to learn to use a plunger, and believe it or not, a lot of people don't know how to use a plunger."

According to Love, there's a right way to plunge a toilet. "Put the plunger in with water in bowl, and after a series of short, quick strokes, pull up until everything sucks down. Usually people do big strokes up and down. Using that method, some blockages won't move."

[Al Dietemann](#), of the Seattle Utilities Department, is concerned that many of the new toilets are coming with inexpensive flappers that deteriorate and go bad in a very short time. He feels that if the manufacturers would spend just a little more on the flapper, replacements would be needed much less often. Leaking flappers are a source of wasted water in a home. The city of Seattle is now engaged in a water study to determine savings of the new water efficient fixtures. [click here](#) for more information and pictures.

"[Fluidmaster](#) and Coast now manufacturing some excellent product that withstands the in-tank bowl cleaners. The latest problem is that of replacement (after-market) flappers and the fact that most will not maintain 1.6 gpf in the toilets tested." John Koeller, P.E.

*FLUSHMATE*-equipped toilets use pressure (not gravity) and have proven themselves to be THE superior [alternative](#) to



gravity-type low consumption toilets.



"noise may startle, but less than before with the new 503 series tank made from resin instead of stainless steel."  
Terry Love

**[Sloan Flushmate  
Flushometer-Tank Systems](#)**

5115 Grand River Avenue  
Wixom, MI 48393-8710  
1-800-533-3460

**note:** Toto, Gerber and Western can be purchased from plumbing contractors. Brands like American Standard, Briggs, Crane, Eljer, Kohler, Mansfield, and Universal Rundle can be purchased from both plumbing contractors and in many hardware stores.

A special thanks to the [plumbing contractors](#) that helped in this report.

### New items



[Caroma](#) is now bringing in their dual flush toilets from Australia. These will flush with either 1.6 or .8 gallons per flush. You will note that they are marked with the half and full markings on the buttons.



Toto has a new toilet called the [Carlyle](#) skirted one piece toilet with concealed trapway that is field [adjustable from 10" to 14"](#).



Also the new ADA compliant handicap two piece toilet called the [Drake](#) with the 3" G-Max flushing system. The standard and ADA version of the Drake expect to be a top performer for commercial and residential use.

Gerber Plumbing products has a new one piece toilet called ["Maurice" #21-012](#) that uses the new Sloan Flushmate III 503 Series.

Crane makes a wall hung 1.6 GPF replacement toilet called the [Rexmont](#). This model comes in elongated 15" height and elongated ADA height of 16.5" The [Rexmont](#) is a gravity model.

American Standard has introduced their [new Cadet EL](#) with an added siphon jet for a better flush action.

### **Poor toilets**

Many new homes come with poor working toilets. Among the most common is the Mansfield Alto #130-160. Just fair is the Kohler Wellworth. [Against the Flow](#)

### **Prison Ware**

The [Penal-Ware®](#) line by Acorn Engineering is virtually indestructible, able to withstand a 2 1/2 ton load. Products included in this line are, the Comby (a wash basin/toilet combination fixture), toilets, urinals, security showers, drinking fountains, modular service centers (this includes a toilet, wash basin, mirror, shelf and light fixture in one unit) and wash basins.

### **Zoe Washlet bidet seats**



Toto makes toilets seats with a warm water wash called a [Zoe Washlet bidet seat](#). For colder climates, they also make heated seats in both the Warmlet and the Zoë Washlet heated model.

### **Panasonic IntiMist Bidet seats**

Panasonic makes the [IntiMist Bidet seat](#). The controls mount on the side of the seat. An added feature is the additional spray nozzle.

### **Daelim bidet seats**

[Daelim](#) makes a bidet seat with a heated seat and air dry

### **Sewage Ejectors**

In cases where there is a need to add plumbing below the height of the existing sewer, a [sewage ejector](#) can be installed which pumps the liquid and solids up to the waste lines.

updated 03/17/2001 [toilets@psbl.com](mailto:toilets@psbl.com) [Terry Love's bulletin board](#)





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