

Tallman Pines: Conservation Efforts Save Vital Water Resources in Florida

Tallman Pines: water conservation efforts are affordable



Case Study Highlights

Community: Tallman Pines
affordable housing
community
Deerfield Beach, Florida

Challenges:

- Water conservation
- Return on Investment

Solution: 400 Caroma
Sydney 305 Round
Front Plus
High Efficiency Toilets

Benefits:

- No clogged toilets or overflows
- Estimated 925,000 gallons of water saved per year
- Positive feedback on conservation efforts

Tallman Pines is a beautiful affordable family community set in an ideal Deerfield Beach, Florida location, conveniently near to the beach, shopping, dining, and major highways. The community consists of a mixture of two and three bedroom, two bathroom homes to meet the purchasing needs of families within all household income ranges. Tallman Pines is Florida style living at its best.

The Carlisle Development Group is one of the nation's leading providers of quality affordable housing. Working with state and local governments, non-profits, and faith-based institutions, Carlisle designs unique, creative solutions for the housing needs of the community. Their experience allows them to manage complex projects while incorporating environmentally-friendly elements into the community's design.

The Tallman Pines development not only met the needs of the community for affordable single family homes. It was also built to achieve the Leadership in Energy and Environmental Design (LEED) Silver certification. LEED certification provides independent, third-party verification that a building project meets the highest green building and performance measures.

Caroma helps environmental efforts

To help the community achieve LEED certification, the Carlisle Group installed Caroma high efficiency toilets into 200 two-three bedroom/two bathroom units to reduce water consumption. The Sydney 305 Round Front Plus toilet is WaterSense labeled. WaterSense, a partnership program sponsored by the U.S. Environmental Protection Agency, mandates that toilets use 20 percent less water than the current federal standard. Because all Caroma floor mount toilets are WaterSense labeled, many toilet styles were available.

The Sydney range of high efficiency dual flush toilets was a great fit for Tallman Pines. The toilets have a two button flushing system: 1.6 gallons per flush (gpf) for solid waste and 0.8 gallons per flush for liquid and paper waste, averaging just 0.96 gpf based on a 1:4 full/half flush ratio. According to Ken Naylor, Senior Developer for Carlisle Development Group,

“We reviewed many different low flow toilets. Caroma was chosen because they are widely adopted, have an established reputation with proven technology, and are very cost effective. The water savings have been tremendous.”

For example, 1.6 gpf is the maximum amount of water that new toilets can use. The Sydney averages 0.96 gallons per flush. For a family of four at Tallman Pines and five flushes/person/day, the one family will be saving more than 4,600 gallons of water annually. With the 200 units installed with Caroma toilets, that equates to more than 925,000 gallons of water savings each year – just from Tallman Pines.

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*Ken Naylor
Senior Developer
Carlisle Development Group*

“We decided to go green for many reasons, including the long-term ownership requirements and partnerships with local authorities, but the reasonable paybacks make a lot of sense,” stated Naylor. *“We received added benefits from installing Caroma toilets that weren’t initially expected – most specifically, with maintenance issues. Since we’ve installed Caroma toilets, we have experienced no problems. There have been no blockages or overflows, and that’s amazing for having so many toilets installed.”*

	5 gal (19 ltr) single flush toilet	3.5 gal (13 ltr) single flush toilet	2.5 gal (9.5 ltr) single flush toilet	1.6 gal (6 ltr) single flush toilet	1.6-0.8 gal (6/3 ltr) dual flush
Annual water used*	36,162 g (137,418 l)	25,314 g (94,022 l)	18,081 g (68,709 l)	11,572 g (43,395 l)	6943 g (26,037 l)
Annual savings with Caroma Smart toilets	29,682 gallons (113,117 liters)	18,833 gallons (69,721 liters)	11,601 gallons (44,407 liters)	5092 gallons (19,094 liters)	463 gallons (1739 liters)

* Based on 1:4 solid/liquid usage for an average family of four and 5 flushes/person/day.

Water savings using a Caroma 1.6/0.8 dual flush toilet compared to other flush volumes.

Because of the large trapway of Caroma toilets, nearly double the North American industry average, the toilets are virtually unblockable. If there is a partial clog from a foreign object being flushed, it is only a partial block, so water can still get passed, avoiding overflows.

Other conservation efforts

In addition to conserving water in the bathroom with Caroma toilets, Tallman Pines helps conservation in other ways. Eco-friendly landscaping with native plants helps conserve water while improving the overall curb appeal. Additional water savings in the bathroom are achieved with high efficiency faucets and shower systems.

2009 changes

In 2009, Caroma is replacing the Sydney range of high efficiency toilets with Sydney Smart HETs, providing even greater water savings. The dual flush Sydney Smart range uses 1.28 gallons per flush for a full flush and 0.8 gallons per flush for half flush, averaging only 0.9 gallons per flush. The Sydney Smart range includes six bowl configurations and is now available in white and biscuit.



Caroma toilet installation in Tallman Pines.

"Since we've installed Caroma toilets, we have experiences no problems... no blockages or overflows, and that's amazing for having so many toilets installed."

Ken Naylor



Tallman Pines affordable housing community consists of two and three bedroom homes with two bathrooms featuring Caroma toilets.

Sydney 305 Round Front Plus



Contemporary style, advanced performance

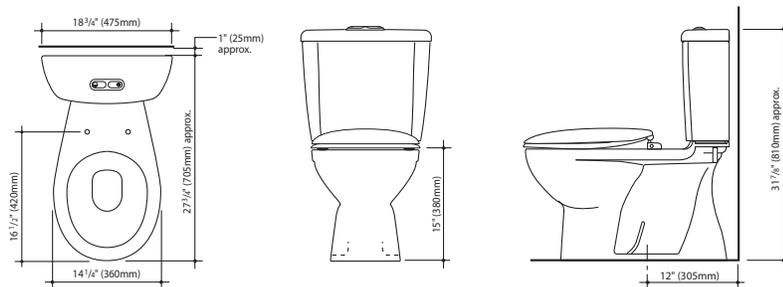
- High efficiency toilet (HET) - 1.6/0.8 gallons (6/3 liters) per flush
- Two piece, two button dual flush toilet
- Round Front Plus bowl
- Large trapway
- Virtually unblockable
- 12" rough-in
- WaterSense labeled

Dimensions

27 3/4" L x 18 3/4" W x 31 7/8" H (bowl height = 15")

In 2009, Sydney 305 will be replaced by the Sydney Smart 305. The Sydney Smart 305 is available in Elongated and Round Front Plus.

Sydney 305 Round Front Plus



Additional information available

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