Haitian Health Foundation Improving Sanitation through Sustainable Toilets



## **Microflush Toilet** Handle-free handwash The tested aerators release clean water by pushing up on a button or displacing a rod Biofil digester Transforms waste using natural - synergistic aerobic digestion into agricultural fertilizer that is dislodged every 2-3 years Low water flush Flushes on just 150cc of water - the grey water

The Global Sustainable Aid Project (GSAP) Microflush Toilet was created and field tested by Professor Stephen Mecca, with the help of GSAP's research partners at the S-Lab at Providence College. This toilet is an off-grid, sustainable, lowcost, environmentally friendly, odor- and fly- free toilet that reuses a small amount (1 cup) of "grey" water from a previous user's hand wash to isolate waste and flush the toilet.

With the Microflush toilet, a user's flush of waste falls directly into a filter-digester, where the solids and liquids are rapidly separated. The solids are composted in an aerobic process enhanced by simple earthworms (*e-fetida*) found anywhere in the world. The small filtrate volume is processed naturally in a soak hole – a micro version of a rural leaching field in the US. There is no dislodging of sludge or transportation to a waste processing plant. Every 2 years (based on an average 5-7 person household), the rear cover is removed and organicallyrich compost is harvested for use in agriculture.

Haitian Health Foundation (HHF) partnered with GSAP to bring these toilets to Haiti and to

facilitate a unique and financially sustainable distribution system that creates small businesses and jobs in connection with the toilets. The first two Microflush toilets built in Haiti are located at HHF's Center of Hope facility. The construction of these toilets served as training for several members of the Jérémie community.

from the previous

handwash

Instead of building latrines, HHF decided that the construction of new houses would include the microflush toilet. attached to the back-outside wall of the house.

The housel also include a low-cost



water filtration system and a 55gallon water tank, all from recycled materials available locally. The house will have a small system for lighting as well, comprised of two light bulbs with independent switches, powered by a small solar panel.



A typical house in the rural villages served by HHF



A newly-completed Happy House