Author's unsavory journey finds him flush with ideas.

Byline: Elizabeth McGowan

W. Hodding Carter IV is among the rarefied few. The curious author recasts a boyhood fascination with bodily functions into a clarion call for a nation to clean up its antiquated wastewater treatment act.

What could have devolved into a sophomoric scatological screed instead emerges as an eloquent examination of our out-of-sight, out-of-mind relationship with effluent in the just-released, 238-page "Flushed: How the Plumber Saved Civilization.''

The idea of delving into what "This Old House'' plumber Richard Trethewey labels the "dark art'' struck Carter a decade ago when he accidentally smashed the main drain (waste stack) in the basement of his West Virginia home. That malodorous mistake sent him on a research mission that began at the local hardware store and didn't end until he'd shadowed a surfer plumber from New England, toured a sewer treatment plant in Boston, snaked through London's sewer system, interviewed the inventor of the two-pit, pour-flush latrine in India and quizzed the advocates for sewage-powered fuel cells at Pennsylvania State University.

"My intention was to write something that was not all gloom and doom,'' Carter said when reached by phone at his home on the coast of Maine. "I wanted to keep people entertained but also inform them.''

Readers learn about how lead pipes lifted Roman plumbing above the rest, why medieval moats were cesspits, and the probable birthing of the water-run toilet by Queen Elizabeth's godson. Carter even reveals his own conservation practices by explaining that his family uses an Australian-made low-consumption toilet with dual flushing options - either 1.6 or 0.8 gallons.

Rather than spewing an environmental rant, however, he said he chose to take readers on a 12-chapter educational adventure from their toilet to the outflow pipes at their local treatment plant. That knowledge, he wrote, should be enough to motivate the masses to "stand at the chain-link fence separating you and your waste at the local sewage plant, breathe in those heady aromas, and decide it's time for a change.''

Blame for failing wastewater treatment plants that pollute the nation's waterways shouldn't fall to those laboring in the industry, Carter said, because he's found them to be an inventive, forward-thinking, adaptable bunch. And spending millions upon billions of dollars to repair and refurbish existing systems isn't practical, he added. Instead, he insisted, it's up to the public to pressure politicians to fund innovative technology that keeps humans from continuing to soil their own nest.

Though he doesn't offer a definitive answer, because he thinks there is more than one, he admits to being enamored with a campaign in India and research in State College, Pa.

Through a nonprofit called Sulabh International, entrepreneur Bindeshwar Pathak is cleansing India's waterways and freeing thousands of untouchables from their caste duty of carting human waste to rivers and streams. His revolutionary latrines generate not only fertilizer and water for gardens, but they also are a source for biogas, which can fuel cooking stoves and water heaters.

At Penn State, Bruce Logan and a team of environmental engineers are tinkering with a sewage-powered fuel cell. Basically, when the bacteria in the microbial fuel cell metabolize the organic matter in wastewater, electrons are released, creating a usable electricity supply.

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CAPTION(S):

EXPLORER UNCOVERED: W. Hodding Carter IV hopes his book, "Flushed: How the Plumber Saved Civilization" by Atria Books, will help people "understand this hidden world I've cut open, and want change."