



# The Mulvaney Pipeline

## WATER

### Will Be More Expensive Than Oil

An increasing population, pollution, waste and global warming all threaten the world's water supply. Water is more vital for human life than oil – and environmentalists, corporations, communities and governments increasingly recognize its unequal distribution around the globe could lead to severe environmental degradation and intense conflicts in the years ahead.

To understand the dynamics of potable water, consider this. Over 97 percent of water on earth is salt water. That leaves just under 3 percent that is considered potable water, 90% of which is consumed by plants and animals and used to irrigate crops. In actuality, there is less than 1 percent of the world's water available for human consumption. 30 percent of the world's population is presently considered "water distressed". This means they have access to less water than is considered necessary for normal life. Experts now agree that given current climatic change and population increases the need for water will double over the next 25 years.

If water is the new oil, T. Boone Pickens is a modern-day John D. Rockefeller. Pickens owns more water than any other individual in the U.S. and is looking to control even more. He hopes to sell the water he already has, some 65 billion gallons a year, to Dallas, transporting it over 250 miles, 11 counties, and about 650 tracts of private property. The electricity generated by an enormous wind farm he is setting up in the Panhandle would also flow along that corridor. As far as Pickens is concerned, he could be selling wind, water, natural gas, or uranium; it's all a matter of supply and demand. "There are people who will buy the water when they need it. And the people who have the water want to sell it. That's the blood, guts, and feathers of the thing," he says.

Water is one of the few unique liquids that is said to "flow up hill toward money". Most of the modern world gives little thought to the supply of water supporting their way of life. If the Hummer vehicle was the red flag of petroleum industry, the hot tub is the red flag for water consumption. We are beginning to see some negative effects of our indiscriminate use of water. Some cities around the world are really feeling the first effects of water scarcity. Sections of California, Nevada and Tennessee have long standing drought conditions. Fountains in Barcelona Spain have been dry for some time now. If you are caught watering your garden in Barcelona, you are chancing a fine of about \$13,000.

### ZERO Water Discharge

Everyone likes a clean and shiny car, but the environmental impact of that is large quantities of wastewater being created for each car washed. Commercial car washes can use up to 50 gallons of water for each wash. Washing your car at home in the driveway with a garden hose can use up to 100 gallons for each wash. Wastewater from any type of vehicle and equipment cleaning can contain significant amounts of substances such as oil and grease, petroleum products, suspended solids such as dirt and grit, heavy metals, detergents, and other pollutants. These contaminants may cause pollution of surface water or ground water and result in violations of water quality standards if the wastewater is not properly managed.

It has been many years since car wash sites were allowed to discharge their wash water to the ground. More recently, car washes have been forced by environmental regulations to connect their drains to municipal sewer systems. This has caused two major problems for car wash firms. Locations for car washes have been relegated to being sited in areas served by sewage systems and have been forced to pay a premium to connect and utilize the sewer system.

The trend today is for car wash services to utilize "Zero Discharge" technology which permits them to operate anywhere a suitable site exists. Zero discharge car wash technology typically uses a combination of water purification methods to reuse and recycle wash and rinse waters. This water is processed through a settling tank where heavy solids drop to the bottom of the tank. Special petroleum eating enzymes are then added to consume any residual oils and petroleum contamination. The water is then processed through various of mechanical filters and separators, with each filtration cycle becoming finer and finer. The final step in recycling utilizes a hybrid type of reverse osmosis filtration system which "polishes" and returns the wash water to a near perfect condition for the next wash. This zero discharge technology, while more expensive than sewer disposal and use of virgin waters, helps us reduce loading on city sewer systems, while improving the environment for us all.

The next time you have your car washed, ask the manager.. "What do you do with your waste water". You might be surprised to find out that many local wash services utilize the zero discharge technology.

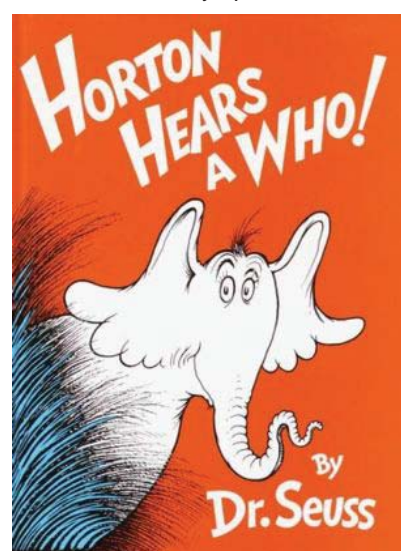


### CAR WASHING WITHOUT WATER?

A new waterless car wash service is calling itself the answer to the global water shortage. Ecowash an Australian franchisor is marketing a new technique which uses a special polymer lubricant to lift dirt and encapsulate it. The dirt is then removed with a soft cloth – all without

water. The company says the polymer leaves a protective coating on the car's surface, which protects the vehicle for up to six weeks.

The International Car Wash Association estimates standard machine washes use 20 to 45 gallons of water, while driveway washes with a garden hose can use 100 gallons. The new waterless wash cost is between \$30 and \$120, depending on the quality of the wash and size of the vehicle. A prime advantage of being waterless is cars can be washed wherever they happen to be parked, whether in a parking garage, on the street or on a showroom floor. This has turned out to be a very lucrative business for one Florida man who currently operates a 3 car fleet of traveling car washers.



### How Small is Small?

A nanometer is one billionth of a meter. Everyone struggles to imagine this very small scale, but you can get an idea through comparison.

Let's look at some commonplace objects. Pick up a book and look at the thickness of an individual page. The average page is about 100,000 nanometers thick. Remember, to be considered nanoscale the object must have one dimension between 1 and 999 nanometers, so this is definitely not within the nanoscale range. A very fine human hair is about 10,000 nanometers wide, which is the smallest dimension we can see with the naked eye. A good comparison is that a nanometer is to an inch as an inch is to a mile.

Although technically nanoscale objects are within the 1-999 nm range, often when people refer to something as being "at the nanoscale," they are speaking about objects smaller than 100 nanometers. Why is nanotechnology so important? Manufactured products are made from atoms. The properties of those products depend on how those atoms are arranged. If we rearrange the atoms in coal we can make a diamond. If we rearrange the atoms in sand (and add a few other trace elements) we can make computer chips. If we rearrange the atoms in dirt, water and air we can make potatoes. Only your imagination limits what is possible. There is a whole world out there that we have yet to explore.



### A TRILLION DOLLAR BAILOUT JUST HOW BIG IS THAT?

We routinely hear about government expenditures in terms of millions, billions and more recently in trillions of dollars. To put this into some sort of scale that even us regular people understand, just consider the following comparisons.

- If you live to the average lifespan of a typical US resident, you would be a senior citizen of about 2.3 billion seconds old.
- A million seconds is 11.5 days. A billion seconds is 32 years.
- If each dollar of a trillion dollars was equal to a second, it would take 32,000 years worth of seconds to equal a trillion.
- A tightly-packed stack of new \$100 bills totaling \$1 million would be about 4 feet high.
- A billion dollar stack of \$100 bills would be 4,000 feet high.
- A stack of \$100 bills totaling \$1 trillion would be 789 miles high.
- A box that holds a case of copier paper will hold about \$72,000 one-dollar bills. It would take 1.4 billion boxes to hold a trillion dollars.

### What could it be? Name the item pictured in the Photo and you could WIN DINNER FOR TWO!



E-mail or FAX your answer to our office. If more than one correct answer is received, a winner will be selected at random. If you e-mail your entry, you must write "NEWSLETTER CONTEST" in the subject line to avoid our SPAM filter. Please mail to [janette@mulvaneyinc.com](mailto:janette@mulvaneyinc.com)

The answer to the WORD Puzzle from last time was: A 19<sup>th</sup> century iron tong tool for picking up lumps of coal to feed a coal fire.

Only one correct answer was received. Congratulations to Samuel John of Rudolph Technologies Inc.

### THINGS I'D REALLY LIKE TO KNOW..

- Why does a round pizza come in a square box?
- What disease did cured ham actually have before it was cured?
- Why is "bra" singular and "panties" plural?
- Why do people pay to go up tall buildings and then put money in binoculars to look at things on the ground?
- How important does a person have to be before they are considered assassinated instead of just murdered?
- Why do you have to "put your two cents in"... but it's only a "penny for your thoughts"? Where's that extra penny going to?
- How is it that we put man on the moon before we figured out it would be a good idea to put wheels on luggage?
- If you have sex with a prostitute against her will, is it considered rape or shoplifting?
- Why is it that people say "I slept like a baby" when babies wake up every 2 hours?
- If a deaf person has to go to court, is it still called a hearing?
- Why are you IN a movie, but you're ON TV?
- Why do doctors leave the room while you change, then see you naked anyway?
- Why do toasters always have a setting that burns the toast to a horrible crisp, which no decent human being would eat?
- Can a hearse carrying a corpse drive in the carpool lane?
- If the professor on Gilligan's Island can make a radio out of a coconut, why can't he fix a hole in a boat?
- Why does Goofy stand erect while Pluto remains on all fours? They're both dogs!
- If Wile E. Coyote had enough money to buy all that ACME crap, why didn't he just go buy his dinner?
- If electricity comes from electrons, does morality come from morons?
- Does the Alphabet song and Twinkle, Twinkle Little Star have the same tune?
- Why did you just try singing the two songs above?
- Did you ever notice that when you blow in a dog's face, he gets mad at you, but when you take him for a car ride, he sticks his head out the window?

### WHAT'S GOIN' ON?

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|-----------------|--|
| Feb 24-26, 2009 | ACCA Conf & Indoor Air Expo<br>Fort Worth, TX  |
| Mar 1 - 5, 2009 | MCAA Annual Convention<br>Scottsdale, AZ       |
| Mar 4 - 8, 2009 | The Construction EXPO<br>San Diego, CA         |
| Mar 10-12, 2009 | NFM Conference & Expo<br>Baltimore, MD         |
| Apr 7 - 8, 2009 | CONEX Connecticut<br>Hartford, CT              |
| May 4 - 7, 2009 | National Hardware Show<br>Las Vegas, NV        |
| May 27-29, 2009 | National Green Buildings EXPO<br>Las Vegas, NV |

"We do not inherit the earth from our parents. We borrow it from our children".