

The Road to Ruin?

The Supply Chain Hits a Pothole

Are supply chain executives too focused on inside-the-big-box operations, ignoring the creeping, insidious deterioration of highway infrastructure and declining capacity to handle ever-growing traffic volumes?

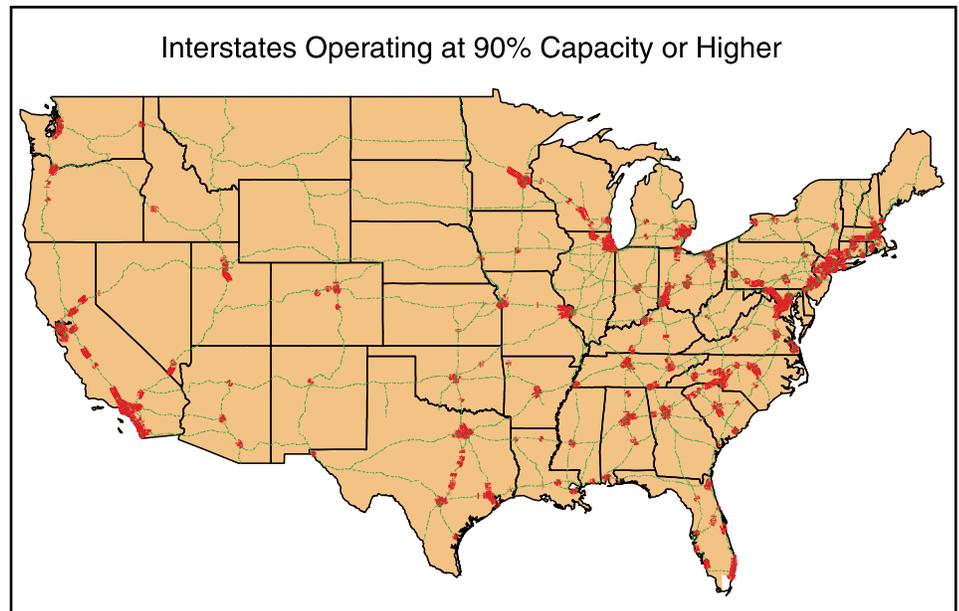
West Coast port disruptions in 2002 provided a glimpse of what can happen when one link in the supply chain fails. And while the risks from eroding infrastructure aren't nearly as catastrophic, that one incident may be a bellwether of problems to come due to traffic congestion and diversion of tax dollars into pet pork projects instead of much needed infrastructure. The latter point is well illustrated by none other than the U.S. Secretary of Transportation: Up to 40% of fuel taxes collected for the Highway Trust Fund are spent on projects other than highway construction.

With the very strong growth in imports, most of which come through ports, it is

troubling to note that some of the worst traffic congestion in the country seems to be around the major port locations along the east and west coasts. The map

below illustrates interstate highways operating at 90% or more of their capacity which affects many major ports.

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After 20 years in business, the time was right to refresh our logo, which we unveil with this issue of *Outlook*. It symbolizes Walker's approach to site selection ...start with a large universe of locations, refine the search and drill down to the best communities to meet our clients' unique requirements for cost reduc-

tion, labor quality and availability, union avoidance, access to transportation infrastructure and much more.

It also represents The Walker Way, our fully-integrated services of location analysis, real estate and incentive negotiations, and management of design and construction, to produce the best outcome and create tremendous value for our clients.

And a side note...it also gives us a great excuse to start printing *Outlook* in color.

Guzzling Water for Fuel... *Ethanol is a Load of Bull...er...Corn*

President Bush has signed legislation that mandates the use of 36 billion gallons of renewable fuels by 2022, of which at least 21 billion gallons must be from advanced biofuels such as ethanol. The principal source of ethanol in the U.S. is corn. The starch in corn kernels is extracted and converted to sugar, which is then distilled into ethanol.

Corn growers and ethanol distillers are dancing in the end zone since this legislation was enacted, but should the rest of us be asking for an instant replay review by the officiating crew? Or put another way...if the government mandates it, can it possibly be a good idea?

In 2006, ethanol production in the U.S. hit nearly 4.9 billion gallons. There are now 138 ethanol biorefineries in the U.S., with nearly 7.8 billion gallons of capacity. Sixty-two plants are under construction, and seven existing operations are undergoing expansion. When this new capacity is online, production output could reach 13.4 billion gallons.

Ethanol has only 66% of the energy content of an equivalent amount of gasoline, and has other shortcomings as well. Unlike gasoline, water will mix with ethanol, so ethanol transport cannot be accomplished through the same pipelines used for gasoline. It requires truck, barge or rail transport, which is far more expensive. Ethanol also requires special blending equipment at the point of distribution and because its energy content is much lower than gas, fuel economy goes down.

So what's the upside? Corn growers and ethanol refiners get a nice subsidy from the federal government. The subsidy for refiners is 51 cents per gallon, while corn growers collected \$900 million in 2006.

The federal mandate to increase the use of ethanol has impacts beyond those traced directly to your tax bill:

- **Water use:** Direct water use in ethanol distillation is four gallons per gallon of ethanol produced. By some estimates, indirect water use is 1,700 gallons to grow enough corn to distill one gallon of ethanol.

- **Land use:** Crop yields are 300 gallons of ethanol per acre of corn, and 20% of the U.S. corn crop is used in ethanol production. The subsidy can drive farmers to shift corn for food production to ethanol production, thereby reducing supply and increasing food prices.

- **Carbon footprint:** Researchers at Cornell University and UC Berkeley have shown that making ethanol from corn requires 29% more fossil energy than ethanol actually contains. In contrast, it takes about 22,000 BTUs to make a gallon of gas, with energy content of 116,000 BTUs.

- **Destruction of wilderness areas:** The artificial demand for ethanol may lead to conversion of wilderness areas to corn production. This could result in a net increase in CO₂.

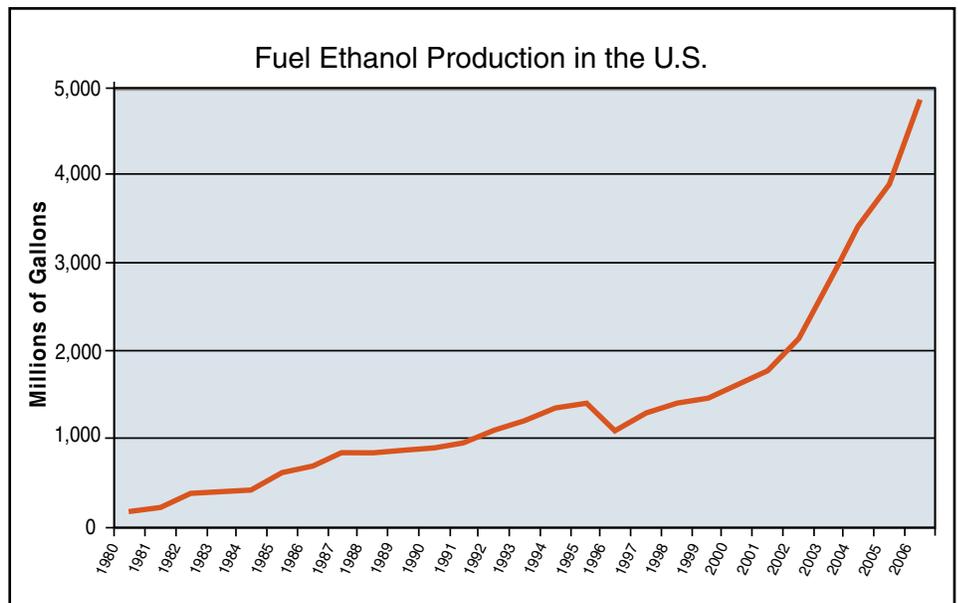
Ethanol enthusiasts point to the thriving ethanol industry in Brazil as a model for

the U.S. to follow. But this argument has some serious weaknesses, the most significant of which is that Brazil's ethanol industry is built around sugar cane, not corn. Ethanol-from-cane is a more efficient distillation process, and growers get up to seven harvests from a single planting, whereas corn is one-to-one. These efficiencies result in yields of 600-800 gallons per acre, compared to 300 for corn.

So why don't we import ethanol from Brazil, you ask? Because there is a hefty tariff on it to protect the U.S. ethanol industry.

If the mandate to use 36 billion gallons of renewable fuels by 2022 was met by ethanol, it would require 120 million acres planted in corn at current yields. Just how much land that encompasses is pretty staggering. That's almost 186,000 square miles, or virtually 100% of the cropland in Texas, Kansas, North Dakota, Iowa and Nebraska combined. Oh...and this will require 144 billion (with a "b") gallons of water just for distillation.

Pray for rain. ■



...Guzzling Fuel for Water *Oil and Bottled Water Don't Mix*

While the government mandate on use of ethanol fuel threatens U.S. regional water supplies, Americans' mania for bottled water is ironically draining the country's fossil fuel resources.

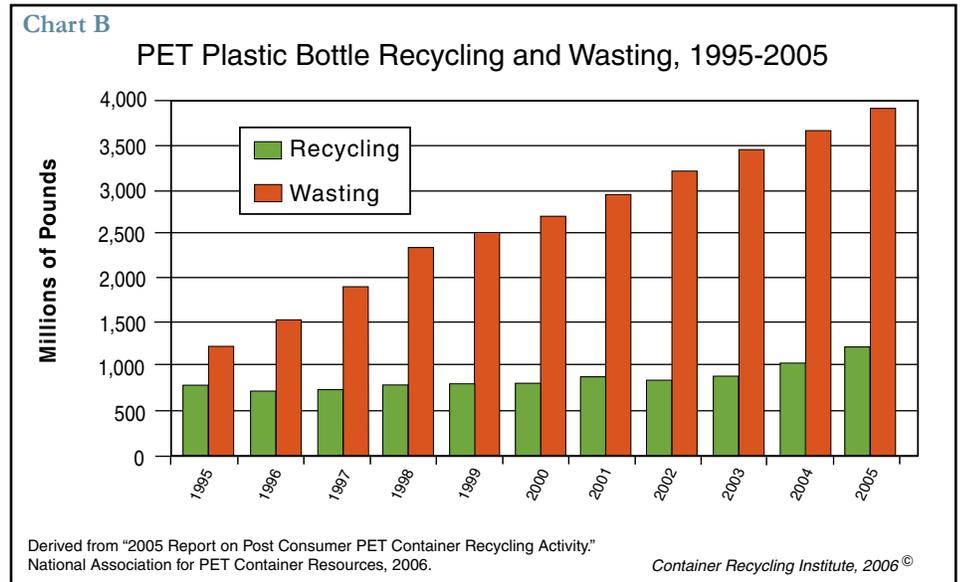
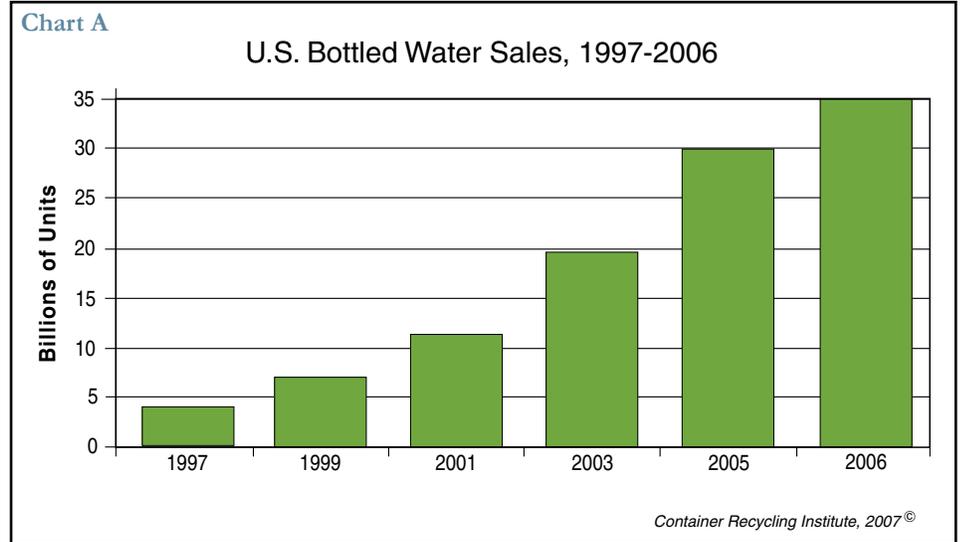
According to "Think Outside the Bottle" (Corporate Accountability International's campaign to challenge corporate control of water), plastic bottle production for bottled water used 17 million barrels of oil in 2007—enough oil to fuel one million U.S. cars annually. The entire energy cost to produce one plastic water bottle is equivalent to filling up a quarter of each bottle with crude oil—making this fact a bitter beverage to imbibe.

Thirsty, health-conscious Americans purchased 35 billion bottles of water in 2006 alone, a marketing monsoon that has escalated from a trickle to a torrent in the past ten years. (View Chart A.) The Worldwide Wildlife Fund touts bottled water as the fastest-growing beverage in the world.

The Container Recycling Institute (CRI) reports that approximately 96% of bottled water is sold in polyethylene terephthalate (PET), single-serve plastic bottles. Unfortunately, these petroleum-based bottles are frequently littered and have a lower recycling rate (below 20% for 2005) than any of the most common packaging materials.

Chart B shows the massive tonnage of plastic bottles that is swimming in our U.S. waste stream.

CRI estimated the national beverage container recycling rate at 33% in 2005, down 20% from the high of 53% in 1992. To encourage recycling, 11 states (Oregon, Vermont, Massachusetts, Connecticut, New York, Delaware, Michigan, Iowa, California, Maine and



Hawaii) passed "bottle bills" requiring a small refundable deposit on non-refillable beverage containers. In these states, recycling rates range from 65-95%, two to three times higher than in states without deposit laws.

However, only three of the deposit states (California, Maine and Hawaii) include non-carbonated containers

in their bottle bills since most states' bottle legislation was enacted before the bottled-water boom exploded on the market.

Under increasing pressure from watchdog groups and even a resolution by the U.S. Conference of Mayors advocating the use of municipal as opposed to bottled water, the three leaders in

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New Port Fees in Southern California

The cost of doing business in the ports of Los Angeles and Long Beach just went up. New per-container fees were approved in December 2007 and January 2008 that could add \$50 per TEU (twenty-foot equivalent unit) to importers using these port facilities.

An Infrastructure Cargo Fee capped at \$15 per TEU will be collected beginning January 2009. The fee will be used to fund port-related infrastructure construction projects. The amount of the fee will be adjusted based on the cost of construction projects undertaken at the time it is collected. The actual fee is likely to be less than \$15 at any given time.

The Clean Truck Fee of \$35 per TEU will be used to assist truckers with the cost of purchasing vehicles that meet the port's environmental standards. Fees will be collected starting June 2008.

Growing imports and ever-larger container ships will only make these conditions worse. Larger container ships strain berth capacity and on-dock storage resources, while traffic congestion around the ports impedes efficient movement inland.

With port growth stymied by environmental activists and NIMBYs, shippers are increasing utilization of container ports outside the New York/New Jersey area and southern California.

But getting goods out of the port is just one challenge. Road congestion in major distribution hubs can also be troublesome. Interstate highways serving key cities for distribution including Los Angeles, Seattle, Atlanta, Chicago, Dallas, St. Louis, Columbus, and almost the entire stretch of I-95 from Richmond to New York City are near, or exceed, their capacity.

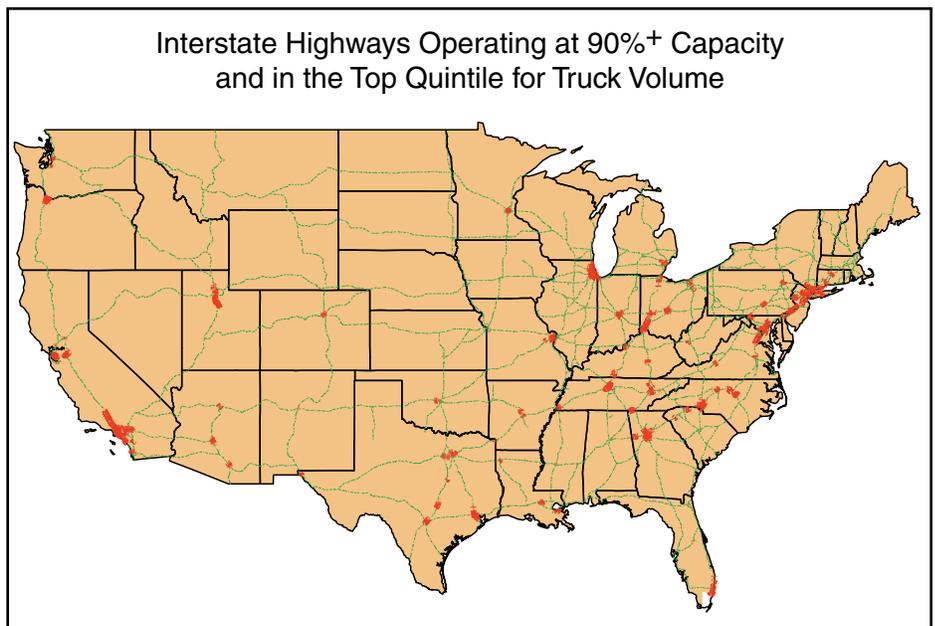
Stagnant road construction in the face of surging imports is a recipe for supply chain inefficiency, made all the worse by the growth in heavy

truck traffic required to accommodate the increase in product volume. From 1980-2005, large truck transport grew faster than all other vehicle types, with an increase in miles traveled of 105%. Large truck volume exceeded 222 billion miles in 2005.

The most congested markets are shown in the map below. The highlighted interstate corridors get a double whammy...they are among the top 20% in truck traffic, and are also operating at, or in excess, of 90% capacity.

President Bush appointed a special commission in 2005 to study this problem. As this issue of *Outlook* went to press the findings had not been released, but the recommendations reportedly will include increasing the federal gas tax from 18.4 cents to 40 cents per gallon over five years, channeling these new tax revenues into maintenance and construction of new highways.

Perhaps Alaska's Ted Stevens will get his bridge to nowhere after all. ■



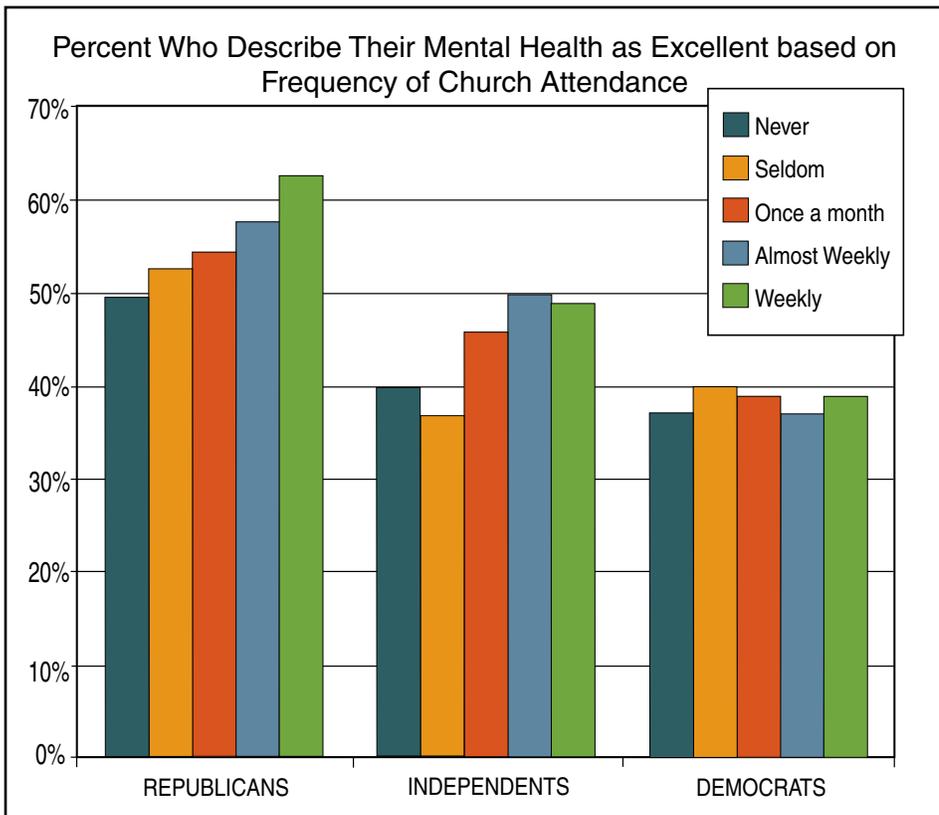
All People Are Born Alike... Except Republicans and Democrats

Every November for the last four years, the Gallup polling organization has conducted a nationwide survey on mental health. Analysis of these polling results shows Republicans are significantly more likely to describe their mental health as “excellent” than are Democrats or Independents.

This discrepancy exists even when the results are analyzed by income level, education, age, gender and church attendance. Whether the respondents are high or low income, well or poorly educated, frequent or infrequent church goers, young or old...those that describe themselves as Republicans rate their mental health as excellent in greater numbers than Democrats and Independents.

Of particular interest is the analysis of party affiliation and church attendance. The more frequently Republicans attend church, the higher the share that rate their mental health as excellent. Among Republicans that never attend church, 50% report their mental health as excellent, and the share increases as attendance frequency goes up. But the share for Democrats is nearly constant regardless of attendance frequency, ranging from 37-39%.

Correlation does not mean causality, of course. Are Republicans more mentally healthy, or are people with good mental health more likely to be Republicans? There is no way to discern this from the data. ■



...Guzzling Fuel for Water Oil and Bottled Water Don't Mix

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the bottled-water industry (Coca-Cola, Pepsi and Nestlé) are exploring recycling incentives for consumers and shrinking the weight of their PET bottles to use less fuel and create less waste.

In addition to the backlash fossil-fuel consumption has generated on plastic bottle production, the \$11 billion-a-year bottled-water industry is now drowning in other controversial debates.

The findings of a 2007 report from Food & Water Watch, a nonprofit consumer rights organization, declares: “Consumers are wasting hundreds and thousands of dollars on bottled water because they think it is healthier or safer than its counterpart from the tap. It is not. Tap water is safe and highly regulated and monitored.”

The report, *Take Back the Tap: Why Choosing Tap Water over Bottled Water is Better for Your Health, Your Pocketbook, and the Environment* not only melts the bottled-water purity myth, it also reveals the following:

- 40% of bottled water is simply filtered or treated tap water.
- The federal government imposes stricter and more frequent safety testing of municipal water providers than it does for bottling companies.
- Bottled water costs consumers 250 to 10,000 times more per gallon than tap water. Tap water averages \$0.002 per gallon; bottled water ranges from \$0.89 to \$8.26 per gallon.

It appears that the three out of four Americans who drink bottled water (to the tune of 28 gallons per person per year) are taking an environmental and economic hosing. ■

Explosion in RFIDs

And We Don't Just Mean in Demand

Aircraft may have been the terrorist weapon of choice in 2001, but Congress has identified maritime security as one of our country's greatest concerns today, fearing a weapon of mass destruction (WMD) in a shipping container entering a U.S. seaport.

While there are many emerging technologies to enhance port security, RFID (Radio Frequency Identification) is quickly becoming one of the frontrunners. Current estimates indicate that the market for these radio-frequency tracking devices could reach \$20 billion by 2010, even though less than 1% of cargo containers (with the exception of Pentagon cargo) is tracked with RFID tags today. With shipping containers viewed by many as a very weak link in port security, RFID technology and its capabilities couldn't come soon enough.

Senator Dianne Feinstein, D-California, said: "Much more needs to be done by the United States to help secure our seaports. Each year, approximately 13 million shipping containers enter United States' ports, including six million from overseas. However, despite the high volume of cargo, only 5% of the containers are actually inspected."

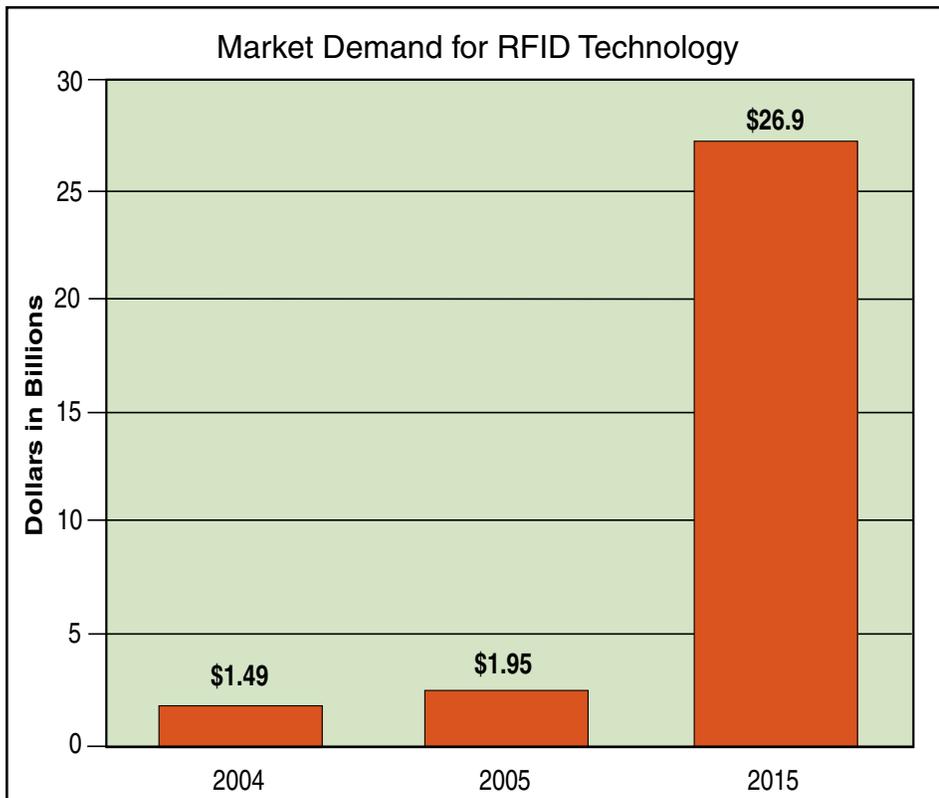
In addition to RFID technology, the federal government implemented a multi-layered defense following 9/11 to ensure the safety and security at U.S. ports. The strategy includes screening and inspection of cargo both in the U.S. and abroad, advance electronic transmission of shipping manifests on cargo bound for the U.S., background and security checks of every worker at the port, implementation of cutting-edge technologies like radiation detection

devices, cargo tracking, new methods of container security, and increased security standards through programs like C-TPAT (Customs Trade Partnership Against Terrorism).

C-TPAT is a voluntary program that can lead to fewer container inspections and faster transit of cargo leaving ports for inland destinations. To qualify, shippers must implement more stringent security procedures covering cargo storage, handling and shipping.

Despite all the aforementioned advancements in port security, RFID is the state-of-the-art tool that is widely regarded as paramount in our defense arsenal. There are obviously benefits that come with using the RFID technology to track cargo, but they must be weighed against possible risks.

While no official statements have been issued, the Defense Department, Congress, and the Department of Homeland Security (DHS) are investigating whether RFID devices could actually be used to trigger a bomb. In November 2007, a college student showed this threat is a real possibility when he detonated an explosive device with an RFID tag, relying on nothing more than the knowledge of the radio frequency and \$20 of supplies from Radio Shack. ■



Private Water, Public ~~Woe~~ “Whoa!”

“Whiskey is for drinking; water is for fighting over.” –Mark Twain, 1884

Mark Twain’s 19th-century sentiment characterizes the growing 21st-century opposition by U.S. citizens to hand over their municipal water supplies to multi-national corporations.

It’s called privatization, but it’s become a very public battle in the war for water control.

The privatization of U.S. municipal water systems in the 1990s became the avant-garde solution for cash-strapped cities faced with stricter EPA standards, diminishing federal funding and aging infrastructure. A handful of multi-billion dollar private water corporations, such as European multinationals RWE, Suez and Veolia, saw profitable opportunities in the ownership and operation of U.S. water utilities.

Nationwide, politicians plugged the politically-correct slogan of “running government like a business” in support of water privatization.

The graph to the right shows the eight-year upward trend in the number of U.S. communities who negotiated water privatization contracts.

It didn’t take long, however, for a significant number of cities to become disenfranchised with this method of municipal water system management:

■ **Felton, CA:** In 2002, this 1,000-resident town founded FLOW, Friends of Locally Owned Water, in an attempt to buy back the city’s water system from Cal-Am, the local subsidiary of RWE, the world’s third largest water company. Shortly after buying the Felton system, RWE proposed a 74% rate increase. Today, FLOW continues the fight to return the water system to municipal control. If a purchase offer doesn’t work, FLOW wants the water system to be seized by eminent domain.

■ **Atlanta, GA:** After only four years, Atlanta terminated its 20-year, \$400-million contract with United Water (U.S. subsidiary of Suez) in 2002. Evidence surfaced that the water giant failed to perform maintenance, billed the city for bogus work, ignored customer complaints, cut staff to dangerously low levels, and occasionally delivered dirty, brown water.

■ **Emmaus, PA:** In 2005, Council members voted against privatizing this small town’s water system after receiving petitions signed by hundreds of residents. “God help any politician who brings this up again,” said Craig Neely, president of the Borough Council.

■ **New Orleans, LA:** The Big Easy became uneasy in 2004 and ended its consideration of water privatization. Local officials questioned the terms of proposed water contracts with Suez and Veolia, and there were bribery and corruption convictions in connection with the city’s privately-operated wastewater system.

■ **Urbana, IL:** Repeated boil-water notices, water cutoffs, and malfunctioning fire hydrants prompted this city of 150,000 to negotiate with RWE to buy

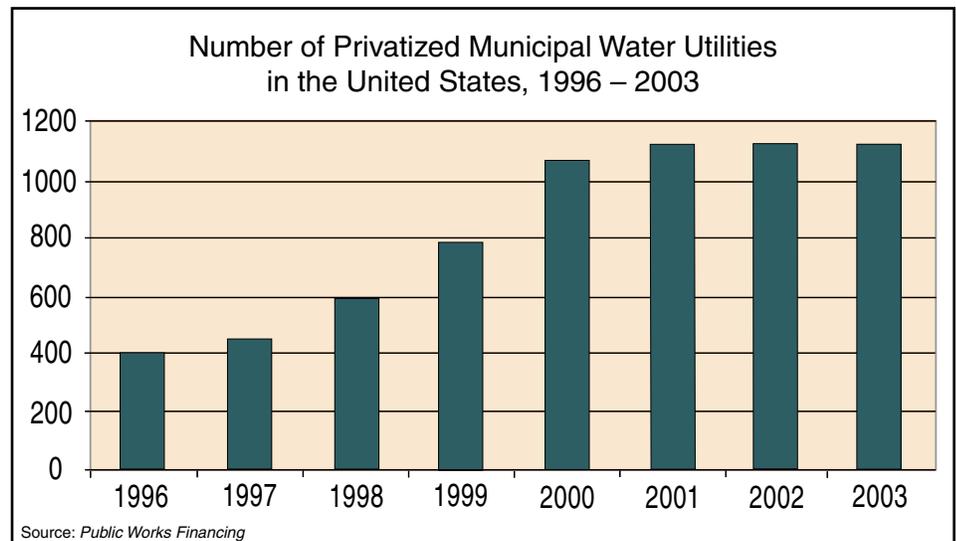
back its water system. Although RWE rejected the town’s offer, state legislation was passed in 2006 that allows cities to use eminent domain to seize control of privately-owned water systems.

Unfortunately, these municipal privatization fiascos were only the tip of the iceberg. From Buffalo to Laredo, many U.S. cities that adopted water privatization contracts have experienced waves of regret via rate hikes, inadequate customer service and harm to natural resources.

While major benefits were supposed to be more efficient performance and cost savings, a 2007 Cornell University/ University of Barcelona study analyzing 40 years of water and sewer privatization found evidence of neither.

Despite the increase in U.S. cities that have secured private water contracts in the past decade, approximately 86% of us still receive our water from a publicly-owned system. According to one national poll, the majority of Americans oppose the concept by a 45-31% margin.

Most of us agree with Mark Twain. ■



Saving Greenbacks with Green DCs

A Little Push From Washington

After a year-long legislative process, the President has signed into law the Energy Independence and Security Act of 2007—an historical initiative aimed at helping move the U.S. toward greater energy independence.

The national initiative for commercial buildings, which was created to reduce the quantity of energy consumed, is specific in its goals. It proposes that all new commercial buildings be zero-net energy compliant by 2030, 50% of all existing buildings be zero-net energy compliant by 2040, and that all U.S. commercial buildings be zero-net users of energy by the year 2050.

The law, which was written to make our nation stronger, cleaner, and more secure is a goal, not a mandate. Nonetheless, it is the first step toward reducing our nation's dependence on oil, confronting global climate change, expanding the production of renewable fuels, and reducing carbon emissions.

While some companies have already jumped on the bandwagon of reducing energy consumption, the upgrades come with a price tag. The construction cost of green DCs (as they are known) by some estimates runs 5-7% higher

than for traditional designs. But advocates argue that with the right design elements and components, green buildings pay for these added costs in three to five years. The marketplace may agree. Green buildings reportedly account for approximately 10-15% of the overall new construction market.

Leading the push for sustainable developments is the U.S. Green Building Council (USGBC), a Washington-based organization that encourages construction of buildings that are environmentally responsible and good investments for both developers and their customers. Membership in the Council has increased from 500 to over 12,000 members in just three years.

A few developers appear to be in the forefront of the green DC movement, striving to achieve LEED (Leadership in Energy and Environmental Design) certification, which has been widely recognized and accepted as the "green standard."

ProLogis, one of the world's largest developers of distribution facilities, has set short-term targets that include the use of 20% recycled construction materials at all new DCs; diversion

of 75% of construction debris from disposal in landfills or incinerators; and a 50% reduction in the use of potable water in landscape irrigation at all new developments. The company has also committed to the use of skylights and windows to introduce more natural light into DCs, and modern fluorescent lighting technologies.

As of March 2007, only 25 buildings in the U.S. were platinum certified, the highest designation awarded by the USGBC. Half-Moon Outfitters, a clothing and recreational gear retailer catering to outdoor enthusiasts, made this certification a goal in development of its small distribution center in North Charleston, South Carolina. The facility became the first LEED platinum project in the state, as well as the first building to win the award under recently-revised guidelines.

The Half-Moon Outfitters building features lights that turn on only when someone enters a room, toilets that run on recycled rainwater, heat that comes from solar roof panels, and furniture made from sunflower husks.

How much greener can it get? ■

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