

The importance of water

by Tyler MacAfee, AMM Director of Policy and Communications

Water is one of the most important and volatile issues of the 21st century. The United Nations believes water will become the most pressing environmental and development issue of this century. While some people take water for granted, others are willing to die for access to this precious resource. Academics fear that future regional and global conflicts will be fought over access to water, much like past wars fought over resources. With a finite supply and no 'technology fix' available to restore its depletion, water will be front-and-centre for many years to come.

Why water is important

While the availability and access to water differs across regions of the world, the importance of water is the same for all – it is essential for survival. However, the available freshwater supply is less than one-half of 1% of all the water on earth. With global consumption doubling every 20 years, more than twice the rate of human population growth, freshwater supplies are in jeopardy.

Right now, about one billion people lack access to fresh drinking water and by 2025, the demand for freshwater will

rise to over 50% of the amount currently available. It is expected that two-thirds of the world's population will be living in conditions of serious shortages and one-third will be living in conditions of absolute water scarcity. Rapid population growth coupled with increases in consumption means the per capita rate of freshwater is steadily decreasing. Many countries and cities are feeling the impact of this reality. For example, oil-rich Saudi Arabia expects to have total depletion of groundwater sources in the next 50 years and Mexico City, with a population of almost 20 million people, could run out of water in the next decade.

What about Canada?

In Canada, the situation is not as dire when it comes to the supply of water. Canada has 7% of the world's renewable supply of freshwater and 20% of the world's total freshwater resources. However, the issue of access is complicated by Canada's large landmass. We also have the reality that, while one-third of the population lives in the Great Lakes and St. Lawrence River Basin and one quarter of the population lives in coastal areas, two-thirds of Canada's freshwater flows north toward Hudson Bay and the Arctic Ocean.

Manitoba has over 94,000 sq. km. of freshwater area comprising 15% of the total provincial area, the highest average in Canada. Manitoba has 11% of Canada's freshwater as well, the highest in Western Canada and behind only Ontario, Quebec, the Northwest Territories and Nunavut.

Canadian consumption practices clearly reflect the fact that we have more water than any other large country on a per capita basis, as Canada is the second largest consumer of urban domestic water in the world. Of Organisation of Economic Co-Operation and Development (OECD) countries, only the US has a greater water consumption rate.

The Challenges

Canada's high rate of consumption and discrepancy between population location and freshwater location means that an extensive infrastructure system is needed to move water around the country. Our



constitution entrusts the responsibility for water, like most natural resources, to the provinces, which have, in turn, delegated much of this responsibility to municipalities. Despite best efforts on the part of all governments, there is a marked deficit in the current water infrastructure. It is estimated that 50% of water supply lines in Canada are in need of repair. At the current rate of 0.6% for water infrastructure replacement, it will take almost 150 years to replace the existing water infrastructure system. Coupled with the fact that the current system has used over 79% of its service life, there are real challenges facing provinces and municipalities.

Water has become a budgetary drain on many municipalities around the world and many have turned over responsibility for local water supply to private companies. In the US, 15% of municipal water systems are privately owned, with Atlanta, Georgia turning over control of their system to a private company in 1999.

Many private corporations see the water business as the final frontier of com-

mercialization and privatization – a new ‘blue gold.’ Considering that the value of the current market is estimated at over \$1 trillion, yet only 5% of the world’s population is currently getting water from corporations, the profit potential is virtually limitless. This is why many transnational corporations have begun acquiring interests in this field.

Some municipalities turn to these private companies to provide relief to the system. In many cases, private companies have been able to come in and provide excellent service at reasonable costs. However, in some cases these private companies have had problems improving the water system around the world, despite promises to the contrary. In France, for example, customer fees increased by over 150% and rates of contamination increased after privatization. In England, rates increased by over 100% and the private company turned out to be one of the worst environmental offenders in Britain. In Bolivia, costs doubled making water more expensive than food. Here, privatization

went to the extreme of forcing peasants and farmers to buy permits to gather rain water on their properties. In Atlanta, the City took back control of the water system from the private company it hired in 1999 due to poor service and water quality. In Ontario, cuts to the Provincial environmental budget resulted in water testing being done in private labs. The importance of the decision to turn over control of local water systems cannot be underestimated and is not one a municipality should take lightly.

Conclusion

Debate on this issue has only begun. Water will be one of the most contested issues of this century, and if current trends continue, solutions to the challenges we face will need to be developed soon. This ‘blue gold’ will create a number of possibilities and opportunities, however it is essential that issues such as access to water, privatization, and commercialization be worked out earlier rather than later, and before any serious environmental damage is caused. ♦



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The Cummins Advantage

ALLEMAN, Iowa (Sept. 24, 2002) - Cummins Inc. (NYSE:CUM) today announced at Farm Progress Show 2002 that it had achieved an important milestone in the application of existing combustion technologies and hardware for its industrial engines required to meet the Tier 3 emissions standard. Cummins successfully demonstrated it could meet the Tier 3 requirements without the addition of aftertreatment devices or other costly hardware and will launch engines prior to the 2005 standard.

“Cummins serves a broad range of off- and on-highway markets, each having different customer requirements,” said John Wall, Cummins vice president and chief technical officer. “We have invested in the technologies that matter most so we can apply the best technical solution to meet customer needs in each of the markets we serve. There is no one else in the world who has this capability,” said Wall.

Cummins solution for achieving Tier 3 standards enables customers to minimize engineering and product development costs by using existing engine platforms with electronic fuel systems, but without the addition of expensive and unproven aftertreatment devices using fuel that can include up to 5,000 ppm of sulfur. Sulfur has been proven to significantly degrade aftertreatment performance. All of the emissions-related changes at Tier 3 will be virtually transparent to the OEMs and the end users with existing fuels, and will provide the lowest total costs at these standards.