

It's the water supply, stupid!

supply, *n.* a quantity of something at hand, as for use; a stock or store.

water supply, *n.* the water available for a community or region.

During the 1992 presidential campaign, James Carville, one of Bill Clinton's political advisors, kept the Arkansas Democrat's campaign on track with a simple battle cry, "It's the economy, stupid." Hold that thought for a moment.

By geologic accident the land area that we know as the Commonwealth of Virginia was endowed with abundant water resources. Over the centuries these resources have nourished a rich ecosystem of living beings and helped to found a great nation. Today, they sustain the life and livelihood of more than 7.5 million persons. Ominously, however, reckless land-use practices are degrading the quality of our water--we have to look no farther than the Chesapeake Bay--and large and prolonged water withdrawals are shrinking the supply.

Water resources--the supply of water that is available for human use--are easy to visualize but difficult to measure. Water doesn't hold still for long. It flows, it percolates, it seeps, it evaporates, and it is transpired. Pinning down the available supply in an area as large as Virginia is an uncertain science. Establishing the value of water resources to future generations is even harder to quantify.

Estimates of water use are easier to come by. According to the Virginia Department of Environmental Quality, Virginians withdraw more than 1.3 billion gallons of water every day. (*Water withdrawal* is the removal of water from a source, such as a river or aquifer, for human use.) More than three-quarters of these withdrawals (approximately one billion gallons per day) come from streams and reservoirs. The remaining 25 percent or so (322 mgd) represent groundwater withdrawals.

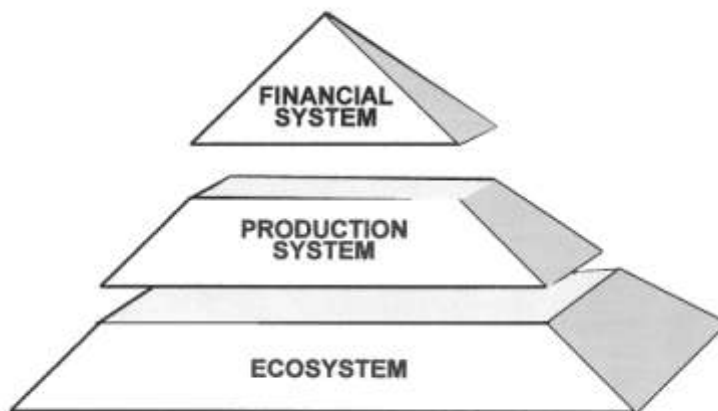
Historically, and despite the short term and generally local effects of periodic droughts, water has been available to Virginians when they have needed it. This ready availability has engendered among the general public a complacency regarding water resources and a false sense of guaranty about their future. In truth, the search for new water sources is experiencing diminishing returns.

Here in the Virginia Tidewater where I live, surface water supplies are virtually "maxed out." A recent court decision killing a plan to construct the King William reservoir on the Pamunkey River, has chilled thoughts of any new reservoirs for the region. And while numerous, rivers meander across the flat expanse of the Coastal Plain, their water is brackish and future potential is limited by the high costs associated with desalination. Additionally, further large surface-water withdrawals will be limited by the need to preserve a minimum volume of flow along the length of the rivers and into the Chesapeake Bay.

Similarly, the prospect of withdrawing seemingly limitless quantities of water from the aquifers of the Virginia Coastal Plain is a dangerous myth. Signs of aquifer stress and supply problems have already emerged, particularly along the western edge of the region. The long-term and persistent decline of artesian water levels is threatening to expand the troubled areas to other regions of the Tidewater. The evidence indicates that the groundwater supply is now in overdraft and any further increase in groundwater withdrawals will only make the situation worse.

As I wrote previously in this forum (see: *To the Last Drop?*), the current Virginia statutes and regulations do little or nothing to halt aquifer overdraft nor do they ensure an reliable supply of available groundwater in the future. They are focused on restraining the quantity of each additional groundwater withdrawal, but not on reducing the cumulative withdrawals to a level that is hydraulically sustainable. In other words, the laws of Virginia ignore the fact that the supply of water resources of the Commonwealth is limited.

Despite the current political climate in which reactionary public officials can garner votes by marching under a banner that reads "The environment be damned," arrogant ideologies do not define the rules that govern our life on this planet. Instead, our lives and welfare are governed by the laws of ecology (and, yes, the laws of hydraulics). Thirty five years ago the noted ecologist Barry Commoner wrote, in *The Poverty of Power*, that many of our environmental problems have arisen because we have lost sight of the fact that our financial system "ought to conform to requirements of the production system, and the production system to the requirements of the ecosystem. The economic system, he wrote, is dependent "on the wealth yielded by the production system and the production system on the resources provided by the ecosystem."



If those politicians who bluster about how it's essential that we live within our means and not pass debt onto our children and grandchildren really mean it, then they had better recognize that the healthy functioning of our economic and production systems is dependent on a reliable water supply. I hope that they might put aside political ideology and take action to ensure the preservation of this supply for future generations of Virginians.

I've never met James Carville. I've watched him on television, of course, and I have to say that I think he was onto something back then in 1992. It's the water supply, stupid!

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