



Community and Economic Development in North Carolina and Beyond Blog: The Economic Benefits of Protecting Healthy Watersheds

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In 1971 in South Korea, a public official presented a draft enforcement decree for the Pollution Prevention Law to the country's cabinet. The minister of the Economic Planning Board, also vice prime minister at the time, was not impressed, first calling the official an "idiot" and then further berating him, saying "I know environmental issues are important, but any money that might be used for the environmental problem can be used to build one more factory."

The story above, taken from Professor Tae Hoon Moon's 2004 article "Environmental Policy and Green Government in Korea," relates an occurrence from half-way around the world 40 years ago. But the basic question involved is still relevant today in our own place and time—does protecting the environment slow economic growth?

Recent Gallop polls have shown that, given the choice, a plurality of Americans say that economic growth should be given priority, even if the environment suffers to some extent.

But for the environment and economic growth, is it possible to have your cake and eat it too? Can protecting the environment provide economic benefits to a community?

The U.S. Environmental Protection Agency recently released a fact sheet on the economic benefits of protecting watersheds as part of its Healthy Watersheds Initiative. The fact sheet provides examples from existing peer-reviewed literature and studies which show that protecting healthy watersheds can reduce capital costs for water treatment plants, can avoid future costs by reducing damages to property and infrastructure due to flooding, and can generate revenue through property value premiums, recreation, and tourism.

Watersheds provide a range of positive environmental benefits such as water filtration and storage, air filtration, carbon storage, nutrient cycling, soil formation, recreation, food and timber. But there is no clear consensus as to the monetized value of these benefits, and that value is likely highly dependent on geographic location. The fact sheet suggests a few methods for assigning monetary value including measuring a citizen's willingness to pay to use or protect watersheds and the indirect method of payments for ecosystem services.

Another method of determining the value of watershed protection is to measure the avoided costs to society due to protection activities. This measurement is most common when preserving a natural area will preclude the need to construct more expensive "gray" infrastructure such as drinking water and wastewater treatment plants.

One extreme example comes from the City of New York, which operates the largest unfiltered water system in the world. The city receives about 1.2 billion gallons of drinking water every day from reservoirs and aquifers located to the north and west. Building a water treatment plant for that volume would cost about \$6 billion in initial capital costs with annual operating costs estimated at \$250 million. Instead, the city has invested about \$167 million annually on watershed protection and restoration to maintain the quality of its drinking water, resulting in significant savings. New York's situation is unique because of the large volume of water involved and because of the unusual exemption granted to it by EPA from treating drinking water, but other communities can follow the example of measuring the financial benefits of watershed protection. In this case, protecting the environment was the smart economic decision.