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The economics of water in Del.

Kauffman, Gerald J **The News Journal** [Wilmington, Del] 03 Apr 2009: A.17.

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DELAWARE VOICE

Clean and plentiful water supplies are vital to Delaware's economic prosperity. Perched on a peninsula between the Delaware and Chesapeake estuaries, Delaware has ample water assets to sustain our economy. With the world in economic drought, Delaware has valuable reserves to meet the next hydrologic drought.

Water is underpriced, yet it is the most essential chemical in society. Economists view this contradiction as the diamond water paradox. Water is a public trust resource but little value is set on its extraction, which creates incentives for waste and pollution.

The first settlers sailed to Delaware for trade and commerce. In 1609 Henry Hudson sailed for the Dutch East India Company toward an inner trade route to Asia, up the South River to latitude 39 degrees 5 minutes north, but reversed course after hitting shoals five feet deep. In 1638 Kalmar Nyckel Swedes established a beaver trading colony at the mouth of the Christinakill, the first permanent European settlement in the Delaware Valley. In 1802 the du Ponts built gunpowder mills along the Brandywine, a river with a hydropower head higher than Niagara Falls.

State water resources are worth over a billion dollars annually. The Delaware River provides 400 millions gallons per day to industries. Christina Basin is worth $270 million based on drinking water, fishing, ecotourism, wetlands and forest ecosystem values. Delaware's drinking water demand is 100 million gallons per day, worth $180 million when treated and delivered. Irrigation sustains a $1 billion farm economy. The Inland Bays support a $500 million tourism economy. Delaware Bay blue crabs bring in $4 million. Wilmington imports 4 million tons of cargo and is the country's largest banana port.

Delaware's 2007 gross domestic product was $60.1 billion with the highest per capita GDP of any state at $56,496. A healthy GDP depends on clean, abundant water resources to support the domestic, industry, tourism and agriculture economy.

Last fall, when Wilmington raised Hoopes Reservoir by 2 feet, Water Supply Coordinating Council purveyors finished construction of 2 billion gallons of storage since the drought of 1999, doubling the goal of 1 billion gallons mandated by the WSCC Act of 2000. Artesian Water drilled 535 million gallons of new and aquifer storage wells. Newark built 392 million gallons at the south treatment plant and Newark Reservoir. United Water stores 500 million gallons in the Stanton tidal capture structure. Wilmington developed 650 million gallons by raising Hoopes Reservoir and working with the Delaware Geological Survey to tap deep reservoir storage. No state dollars funded this infrastructure and no forests or wetlands were damaged by their footprints. These reserves, worth $10 million, provide a healthy surplus to meet a 2002 drought record with peak demands forecast for 2020.

These achievements are a boost to Delaware's economy not available a decade ago. The governor's office stressed the economic need for new water supplies using business models based on reliability and conservative drought scenarios. Ten years ago, a coffee company decided not to relocate to New Castle County partly over concerns about water infrastructure. Now, if an electric car plant, wind power assembly, or brewery comes to Delaware, a healthy water surplus can accommodate their needs.

Delawareans conserved water by 15 percent after the 2002 drought, an ethic that saves on water bills. Conservation water rates adopted by suppliers have reduced demands. Leak detection projects cut usage by 3 million gallons in Wilmington alone. Water savings amount to 8 million gallons over a 75-day drought or 600 million gallons, twice the size of Newark Reservoir.

Financial investments in Delaware watersheds are paying off, creating hundreds of jobs. Along 30 Delaware streams, eight of 10 stations recorded improved or constant water quality since the 1970s. More than $1.5 billion in Clean Water Act grants have renovated the Delaware River, and striped bass have returned to a once-dead river. Wilmington constructed huge tanks under parks to reduce sewer overflows. New Castle County administers an Environmental Protection Agency award-winning water resource protection area ordinance.

The Delaware Estuary Program restores freshwater mussels, nature's water filter. The Department of Natural Resources and Environmental Control finished Delaware's longest stream restoration project along Pike Creek in the White Clay Creek Wild and Scenic Watershed. The Brandywine Conservancy is removing old dams to restore American shad migration for the first time in centuries.

Appoquinimink River Association and Delaware Nature Society build rain gardens to recharge stormwater. The Nutrient Management Commission worked with farmers on 150,000 acres to reduce phosphorus from manure. In the Murderkill, Kent County works with University of Delaware scientists to fix a low-oxygen block. Near the Inland Bays, Sussex County replaces leaking septic systems with modern wastewater systems.

The fluid economy provides incentives to price ecosystem services such as drinking water and develop modern mechanisms to finance Delaware clean water programs.

The 2009 Recovery Act provides a $14 billion jolt for water projects nationwide and $20 million for clean water projects in Delaware. With sustainable funding, Delaware tributary teams could restore 50 percent of the streams to fishable and swimmable standards by 2020.

Water is Delaware's economic life blood and should be equitably funded. It is worth public/private investment in green infrastructure jobs to protect Delaware's most precious natural resource. Clean water is good business.

Gerald J. Kauffman is director of the University of Delaware Water Resources Agency and since the drought of 1999 has served as temporary water coordinator in accordance with the Delaware Water Supply Coordinating Council Act.

Word count: **907**

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