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Desalination Is Not the Answer for Rockland County

Fact Sheet • April 2009

On December 14, 2006, the New York Public Service Commission granted United Water New York permission to raise its rates for three years in a row, starting with a 23 percent hike in 2007.[1] In exchange, United Water promised a long-term water supply project for Rockland County.[2] A month later, United Water announced that it had submitted a plan to build a desalination plant in order to fulfill its commitment.[3]

United Water's proposed Haverstraw Water Supply Project, located across the river from the Indian Point Energy Center, a nuclear power facility, would draw water from the Hudson River estuary and distribute it to Rockland County.

Like other such projects, it involves a new intake, pumping station, treatment facility and distribution mains.[4] Unlike traditional plants, however, it must be able to remove salts in addition to the PCBs, strontium 90 and other industrial chemicals in the Hudson River.[5] To do this, it will use reverse osmosis desalination.

Following a long history of activism around protecting the Hudson River, a coalition of residents, elected officials, members of state and county boards, and area activists in Rockland County have come together today to oppose the desalination plant. While residents of Rockland County are paying higher bills, United Water's plan could damage the environment, encourages overdevelopment in Rockland County and fails to evaluate conservation alternatives that do not present these problems.

What Is Desalination?

Simply put, desalination removes salt and other minerals from water. There are several ways to do this. United Water's proposed plant would use reverse osmosis, which pumps water over membranes with tiny holes in them that block the passage of salts and other chemicals. This process, when used on a large scale, comes with a range of social and environmental problems.

Dangers of Desalination in Rockland County

United Water's Haverstraw Water Supply Project will not be immune to the risks inherent to desalination. First, desalination is very expensive. United Water's plant is already estimated to cost around $80 million and will likely cause further rate increases.[6] It would not be surprising if desalted water costs more than expected, as desalination plants often do not operate at their full capacity, and often underestimate how much the water will cost.

The Indian Point Energy Center on the Hudson River in Buchanan, New York. Photo by Daniel Case.

Once built, the plant will also be expensive to maintain because desalination requires a lot of energy. United Water says its proposed plant will use between 4,427 and 6,520 kilowatt-hours of electricity per million gallons of water produced (kWh/Mgal).[7] Although water utilities in the United States vary in how much energy they use, most use between 250 and 3,500 kWh/Mgal[8] — much

less than the desalination plant. Energy prices fluctuate, so this might mean even more rate increases later on, and regardless of the price, the high energy use will contribute to global warming.

In addition, desalination plants can suck in and kill fish and other organisms in their machinery, depending on how they are sited. United Water's project will be built in Haverstraw Bay, a water body identified as essential fish habitat for many important fish species. The company states in its analysis that it will minimize the harm of its intake, and that construction would only temporarily disturb the area.[9] However, there is no guarantee that the habitat will naturally recover as the company hopes.

One of the biggest challenges associated with the technology is disposing of its waste safely. Generally, a portion of the water that enters the plant remains behind along with the salt and an array of chemicals from the industrial process. Some plants release this toxic sludge back into the water, toxins and all.

United Water plans to send its saltwater waste to the Joint Regional Sewage Treatment Plant where it will be combined with the effluent from the sewage plant and released back into the Hudson River under the treatment plant's discharge permit.[10]

As for whether Hudson River water is safe to drink, most technical experts agree that the technology can reduce the chemicals to acceptable levels, but some local residents and groups have concerns that trace amounts of radioactive chemicals in drinking water will pose human health risks.

The state Department of Environmental Conservation, too, has concerns. After reviewing an initial draft of the plan, it said it would need more information about alternatives, zoning, the landfill site and how the company plans to address the impacts in order to approve the project.[11]

Desalination Will Not Solve Rockland County's Water Problems

United Water promised the state of New York that in order to provide a long-term water supply for Rockland County, it would produce an additional 1.5 million gallons per day (mgd) average daily supply and 7.1 mgd peak supply by the end of 2015.[12] The company says it can do that by building its plant in stages, which will eventually reach a capacity of 7.5 mgd by the time demand reaches that quantity, sometime after 2021.[13]

This plan sounds simple, but a closer look at Rockland County's water history reveals that even if the plant does supply that much water, it will not likely produce a viable long-term supply. It turns out that United Water's estimate of the county's needs is not based on how much water current residents use, but rather on how much water the county will use assuming that there will be 15,540 new connections in the water system between 2008 and 2025.[14]

Tapping into the Hudson River to quench the thirst of these new developments will not likely create a sustainable supply of water. Instead, it may allow further development — which may create an even larger demand for water. Rockland County's natural resources cannot sustain this endless development. Already, studies from the United States Geological Survey show that streams and rivers are drying up, which is why the state Health Department must approve new water connections.[15]

And development is not straining water resources only because it increases demand. It also interferes with the natural processes that protect the water system in the long term. When rainwater hits paved surfaces, it cannot trickle through the ground to replenish the aquifers that feed the wells of the water system. Instead, it is diverted through drains into the sewage system.[16]

Rockland County has been taking steps to understand and protect its natural resources by partnering with the state Department of Environmental Conservation and United Water to fund a study by the United States Geological Survey to assess how much water exists in Rockland County's aquifers.[17] United Water proposed its plan to move forward with a new project even though the results of the study have not yet been published.

Rockland County Has Better Options

United Water's plan also does not include an analysis of conservation measures it could take instead. Conservation measures are almost always cheaper and more environmentally friendly than desalination. In fact, the company could save 2 million gallons a day by installing new pipes and reducing leaks in service connections.[18] This would produce almost as much water as the desalination plant in its first planned phase of operation[19] — without any of the risks. Residents, too, could save water

by installing more efficient appliances and cutting back on water use.

However, the company says that it cannot consider conservation in its planning because it is a private company, not a public agency, which means it cannot enforce conservation measures.[20] It fails to mention that as a private company, it actually may have incentive to pursue this expensive project for reasons that have nothing to do with providing a long-term water supply for Rockland County.

Since United Water is a corporation, it must produce profits to distribute to its shareholders — who are not necessarily residents of Rockland County. Water companies usually have little incentive to promote efficiency programs because residents pay less for their water when they use less of it.[21]

Desalination: A National Trend

Rockland County is not alone. Many communities around the country, fearing water shortages, are considering desalination proposals without fully assessing the costs, consequences or alternatives. And projects are often pushed hard by corporations that stand to make a profit.

In 1991, Santa Barbara built a $34 million plant but never used it because it was too expensive to maintain.[22] In Florida, Tampa Bay's seawater plant came online only after contract and technical failures,[23] and now produces less water for a higher price than originally promised.[24] Today, the Marin Municipal Water District in California is looking at building a plant as well,[25] yet conservation projects could produce the same amount of water at a fraction of the price of desalination.[26]

Most public agencies are turned off by the high costs of such projects. Seabrook, New Hampshire,[27] and the Brownsville Public Utilities Board in Texas both considered full-scale desalination plants but decided they were too expensive.[28] Private companies, however, are less fazed by the high costs, because they see an opportunity for profit. Poseidon Resources, Inc. wants to sell desalted ocean water to nine public agencies in California,[29] while Aquaria Water LLC, will be charging the town of Brockton, Massachusetts, a premium for desalted river water.[30]

Conclusion

Many proposed desalination plants around the country raise rates for the consumer, pose risks and fail to encourage long-term sustainable water management. And, under the control of corporate ownership, these plants are often motivated by what makes the biggest profit margin for shareholders rather than the best interests of ratepayers. United Water's proposed plant may pose the same risks. It is not a long-term solution for Rockland County, and may cause more problems than it solves. To truly address Rockland County's water supply, residents and policymakers must take a comprehensive approach to water management that includes conservation and land-use planning, rather than allowing corporate interests to drive water policy.

Learn More

To learn more about why desalination is not a good water supply option, check out *Desalination: An Ocean of Problems* at www.foodandwaterwatch.org/water/desalination.

Take Action!

Reduce your water use: Replace thirsty, conventional lawns with attractive, drought-tolerant ground covers. Help conserve water by turning off the faucet when you brush your teeth, cutting down your shower time and installing low-flow fixtures whenever possible.

Spread the word in your community: Inform your neighbors about the Haverstraw Water Supply Project, contact your county officials and let them know your opinions, or write an op-ed or letter to the editor for your local newspapers.

Learn more and make your voice heard: The New York Department of Environmental Conservation (DEC) will hold a public scoping session on Thursday, May 7th. The DEC anticipates that there may be significant environmental impacts resulting from the proposed desalination plant and the legal process in New York allows the public to help identify these impacts and voice their concerns to DEC researchers. Written comments are encouraged and will be accepted until 5:00 pm on Friday, May 22, 2009. Comments should be addressed to: Jeremy Rosenthal, Environmental Analyst, Division of Environmental Permits, 625 Broadway, 4th Floor, Albany, New York, 12233, telephone (518) 402-9159. The draft environmental assessment form is available online at: www.haverstrawwatersupplypoject.com/index/php/draft-environmental-impact-study-deis.html. You may also bring written statements to be read on May 7th at one of the two scheduled Public Scoping Session for this project: 1:30 pm –4:00 pm and 6:30 pm – 9:30 pm. Location: Haverstraw Town Hall, One Rosman Road, Garnerville, NY. Feel free to attend the public scoping session to learn more about the issue, and submit a written comment on a later date.

Get involved: Join the Rockland Coalition for Sustainable Water to help protect our environment and defend the health of our community. For more information about the coalition, contact the members listed below.

Contact

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Endnotes

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