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HRSD Launches Sustainable Water Initiative for Tomorrow (SWIFT)

Pilot Phase produces purified water

SEAFORD, Virginia – HRSD today announced the launch of the Sustainable Water Initiative for Tomorrow (SWIFT), an innovative water purification initiative in eastern Virginia designed to ensure a sustainable source of groundwater while addressing environmental challenges such as Chesapeake Bay restoration, sea level rise and saltwater intrusion.

The launch of SWIFT was held on the national "Imagine a day without water" to call attention to an initiative that could help ensure that future generations of Virginians will not have to contemplate a shortage of our most precious resource. The site was HRSD's York River Treatment Plant in Seaford, Va., where pilot-scale advanced water treatment processes are producing purified water, a first for HRSD. SWIFT is now one step closer to the ultimate goal of replenishing the Potomac Aquifer with purified water to help stabilize groundwater supplies and achieve goals established to restore the Chesapeake Bay.

"The Sustainable Water Initiative for Tomorrow is vital to proactively addressing our water, environmental and economic needs not only for today, but for generations to come," said HRSD's General Manager Ted Henifin. "We know that Virginians want forward-looking solutions to tackle today's problems. Our water is too valuable to waste – and SWIFT allows us to recapture this important resource and use it to address our depleting groundwater supply while addressing multiple other water related environmental challenges."

The multi-year initiative will take already highly treated wastewater that would otherwise be discharged into the Elizabeth, James or York rivers and purify it through additional rounds of advanced water treatment to produce drinking-quality water. The purified water will then be treated to match the existing groundwater chemistry and added to the Potomac Aquifer, the primary source of groundwater throughout eastern Virginia. Preliminary results highlighted at today's event demonstrate that this technology is safe and effective at a HRSD facility, as it has been in other locations across the country and throughout the world.

Two proven drinking water treatment technologies are being tested in SWIFT's pilot project. One is membrane-based while the other is carbon-based. Both are multi-step processes creating multiple barriers to remove potential contaminants. Both use ultraviolet light as the final step of the process to purify HRSD's already extensively treated water. Stringent monitoring throughout each stage of advanced treatment ensures the final product is safe and reliable.

SWIFT is designed to:

- Establish a secure groundwater supply for current and future generations;
- Improve water quality in local rivers and the Chesapeake Bay, helping to meet Bay cleanup goals;
- Support Virginia's economy by providing businesses with the water they need to operate:
- Produce water that meets human health criteria and matches existing groundwater chemistry to ensure the highest quality standards are met;
- Help fight sea level rise and salt water intrusion due to a shrinking aquifer;
- and, provide a cost-efficient means of addressing current and future regulations.

In developing the SWIFT initiative, HRSD is working closely with leading agencies and experts such as the Virginia Department of Health, Virginia Department of Environmental Quality and a panel of scientific experts assembled to help oversee the project. SWIFT has also benefitted from positive engagement with the Chesapeake Bay Foundation, the U.S. Environmental Protection Agency and the United States Geological Survey. With this insight from diverse leaders, SWIFT was able to focus on a process that will provide high-quality, purified water to sustain a growing population, improve local ecology and create positive economic returns in the long run.

"Addressing the groundwater issues in eastern Virginia is a top priority of Governor McAuliffe's administration and this initiative holds real promise as a long term solution to avert a future groundwater crisis. With the added benefits of helping Virginia meet our Chesapeake Bay cleanup obligations and potentially slowing the rate of land subsidence, this initiative has the potential to be transformational," said Virginia Secretary of Natural Resources Molly Joseph Ward. "SWIFT is an example of the type of innovation that is good for both our environment and our economy."

"Significant progress to restore the Chesapeake Bay has come through leadership and hard work over the past three decades. Yet, achieving the region's goal of a restored Bay faces daunting challenges. Those challenges command new thinking to explore and advance innovative and sustainable technologies," said the Chesapeake Bay Commission's Virginia Director Ann Jennings. "The SWIFT initiative does just that; pushing beyond our prior approaches with the potential to significantly reduce nutrient discharges into the Bay and address multiple environmental issues."

The results of this pilot project will be used to select the appropriate technology to be used in a larger demonstration project planned for the Nansemond Treatment Plant in Suffolk, Va. A facility that can purify 1 million gallons per day of water using advanced treatment processes and then treat it to match the existing groundwater will be constructed in 2017. HRSD will then test its ability to pump this water into the aquifer. The results of groundwater replenishment at this site will be extensively monitored for one year. The findings will be used to support requests for the necessary state and federal approvals.

For more information about SWIFT, please visit <u>www.SWIFTVA.com</u>. For more information about HRSD, please visit <u>www.HRSD.com</u>. For more information about "Imagine a day without water," please visit <u>www.thevalueofwater.org</u>.

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About the Project

The Sustainable Water Initiative for Tomorrow (SWIFT) is a water purification project in eastern Virginia that seeks to ensure a sustainable source of groundwater to meet current and future needs in the region. The project will take HRSD's already highly treated water that would otherwise be discharged into the Elizabeth, James or York rivers and purify it through additional rounds of advanced water treatment to produce drinking-quality water. The purified water will then be treated to match the existing groundwater chemistry and added to the Potomac Aquifer, the primary source of groundwater throughout eastern Virginia. This will ensure a sustainable source of groundwater while addressing environmental challenges such as Chesapeake Bay restoration, sea level rise and saltwater intrusion.

About HRSD

HRSD's mission is to protect public health and the waters of Hampton Roads by treating wastewater effectively. A political subdivision of the Commonwealth of Virginia, HRSD was created by public referendum in 1940 and currently serves 17 cities and counties in southeast Virginia, an area with a population of 1.7 million.