

# Sustainable Water Initiative for Tomorrow (SWIFT)

The Sustainable Water Initiative for Tomorrow (SWIFT) will add advanced treatment processes to several HRSD facilities to produce water that meets drinking water standards. This SWIFT 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 achieve several important benefits that will help ensure future generations inherit clean and abundant waterways.

## What benefits could SWIFT offer?

SWIFT could: *help the Chesapeake Bay* by significantly reducing the amount of nutrients such as nitrogen and phosphorus that HRSD discharges to local waters; *provide a sustainable source of groundwater*, replenishing this depleted natural resource so groundwater is abundant for generations to come; and *reduce the rate at which land is sinking* in Hampton Roads, which will enhance the ability of the environment and our communities to adapt to rising seas.

## Why is HRSD considering SWIFT?

HRSD's mission is to protect public health and the waters of Hampton Roads by treating wastewater effectively. The residents of the HRSD service area send approximately 150 million gallons of wastewater to HRSD each day. HRSD cleans this water to exacting state-regulated standards and returns it safely to area waterways. The highly treated water HRSD

currently produces exceeds the water quality requirements of local waterways; with the addition of advanced treatment processes, HRSD can produce water that meets drinking water standards. HRSD is exploring ways to use that SWIFT Water to provide Hampton Roads and Virginia added environmental and societal benefits.

## How will you know the project is safe?

The quality of the water will be carefully and continuously monitored to ensure that it meets human health standards and that the aquifer is protected. The design and selection of treatment processes is being overseen by an independent technical advisory panel of leading experts on the engineering and science of water purification to ensure the best science is being applied.

## How far along is SWIFT?

HRSD completed the SWIFT Pilot program at its York River Treatment Plant in early 2017. The

**HRSD** is exploring ways to produce purified water to help the Bay, provide a source of sustainable groundwater, reduce the rate at which land is sinking and prevent saltwater intrusion.

## CONTACT:

SWIFT@hrsd.com  
757.460.7056

[swiftVA.com](http://swiftVA.com)



SWIFT Research Center, currently under construction at the Nansemond Treatment Plant is scheduled to open in spring 2018. The Research Center will produce up to one million gallons of SWIFT Water per day using Carbon-Based Advanced Treatment and then treat it to match the existing groundwater before adding it to the Potomac Aquifer.

### Has something like this been done before?

The technology HRSD is evaluating for use in SWIFT is tried, tested and has a proven track record of safety and effectiveness. It is in use across the country, the world and even here in Virginia, where it has been deployed for more than 30 years.

### Is aquifer replenishment safe?

The oil and gas industry have been suspected of causing earthquakes in other parts of the United States with their high pressure injection of drilling wastewater into fractures and fissures of the bedrock deep below the earth. Unlike the oil and gas injections, SWIFT Water will be pumped at low pressures into permeable sand and gravel in the aquifer, well above the bedrock. SWIFT is putting water back into a thirsty aquifer.

### What is the projected timeline of the project?

No final decision will be made regarding this project until all processes are proven reliable and effective with appropriate testing and evaluation at HRSD facilities; all local, state and federal

regulatory requirements are met; and a comprehensive public input process has been conducted with all comments thoroughly addressed. The earliest the final approvals might be sought would be late 2018 or early 2019.

### Who is reviewing this effort?

HRSD is working with the Virginia Department of Health, the Virginia Department of Environmental Quality, the US EPA and a group of expert stakeholders to develop the appropriate long-term monitoring and oversight program for SWIFT. A permit is required from US EPA before SWIFT Water can be pumped into the aquifer. To date there have been no regulatory, public health or technical issues identified that would prevent this project from moving forward.

### Will I get an opportunity to learn more and express my opinion on this project?

HRSD will be reaching out directly to the communities we serve to hear from our customers and other stakeholders. We are committed to providing transparency and opportunities for engagement throughout this process.

### How will HRSD manage this investment in eastern Virginia's future?

HRSD believes the estimated \$1 billion cost of this initiative could be integrated with its plan of responsible investment in wastewater infrastructure over the next 20 years, without rate increases beyond those currently planned.

