1980s

IBM's launch of the personal computer in 1981 set the industry standard.

HRSD's Peninsula Composting Facility, constructed in 1981 on the site of the old Camp Patrick Henry Treatment Plant, produced Nutri-Green® Compost.

Construction of the 10 MGD Nansemond Plant was nearly finished in December 1982.

Still under construction in 1989, the Virginia Initiative Plant would save $20 million in capital costs and $1 million in operating costs by combining two existing facilities into one treatment plant. It also would incorporate biological nutrient removal for a cost just five percent higher than conventional secondary treatment.

An Era of *Expansion & Initiative*

Economic growth was the mantra of the 1980s. It was also a time of federal budget and tax cuts. But with the Cold War at its height, and coming off the Iranian hostage crisis, the Reagan administration pushed for a 600-ship Navy. Hampton Roads was the beneficiary of major increases in defense spending and ship construction. With it continued an influx of new residents in South Hampton Roads and on the Peninsula.

Fortunately, with major groundwork completed the previous decade, including site acquisition, design and funding secured under the Clean Water Act, HRSD had three new treatment plants under construction as the 1980s began.

The Composting Facility staff in the early 1980s included (left to right) Danny Finley, Phillip Edwards, Todd Williams, Mardane McLemore and Nathanial Greenly.

1981 The Peninsula Composting Facility opened.

1983 The Atlantic Plant, Nansemond Plant and York River Plant were placed in service.

1983 The first Apprentice Class graduated.

1988 Portsmouth joined HRSD.

1988 The Williamsburg Plant expansion began.

1989 The Virginia Initiative Process patent was received.

Nansemond, Atlantic and York River Plants Completed

Work on the 36 MGD Atlantic Plant, the largest of the three, began in 1979. Close behind was the York River Plant, a 15 MGD facility whose groundbreaking took place December 18, 1979. Construction of the $25 million, 10 MGD Nansemond Plant started in 1980. In 1983, all three major new treatment facilities began operations.

In addition, upgrades and expansions continued at existing plants. In 1980, the James River Plant was expanded to 20 MGD and Chesapeake-Elizabeth to 30 MGD. The capacity of HRSD's first treatment plant, Army Base, which was placed in service in 1947, was expanded to 18 MGD in 1981. The following year, improvements completed at the Boat Harbor Plant expanded its capacity to 25 MGD.

Situated on farmland adjacent to hog lagoons and a serene family cemetery, the Atlantic Plant was a 36 MGD secondary treatment facility.

The York River Plant began operations in 1983 as a 15 MGD secondary treatment plant.

The Nansemond Plant diffuser was assembled at Craney Island in March 1982.

Beneficial Reuse of Biosolids

When the Atlantic Plant was constructed, it was envisioned that the nutrient-rich organic materials resulting from the treatment process would be recycled and applied to farmland as fertilizer to improve soils and stimulate plant growth. HRSD purchased land adjacent to the plant and in 1980 established the Progress Farm. The research that would be conducted there documented the safety and benefits of land application.

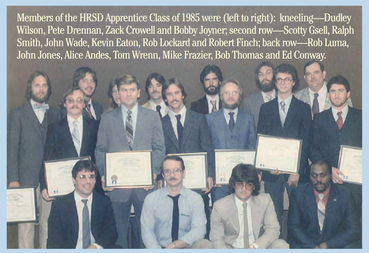
Composting provided another beneficial reuse of biosolids. In 1981, an open-air facility was constructed at the old Camp Patrick Henry Plant, and HRSD began production of up to 12 dry tons of Nutri-Green® compost per day.

Building Careers and Excellence

To address the challenge of staffing three new plants with skilled operators and maintenance personnel, General Manager James R. Borberg spearheaded HRSD's creation of the nation's first wastewater apprenticeship program. A combination of on-the-job training and classroom instruction, the program, which graduated its first class in 1983, perpetuated excellence in the HRSD workforce.

Portsmouth Joins HRSD

Many of Portsmouth's most influential leaders had actively campaigned against the establishment of a sanitation district so, as permitted by the 1940 regional referendum that established HRSD, Portsmouth chose not to join the district and opted to build the Pinners Point Plant.



Members of the HRSD Apprentice Class of 1985 were (left to right): kneeling—Dudley Wilson, Pete Drennan, Zack Crowell and Bobby Joyner; second row—Scotty Gsell, Ralph Smith, John Wade, Kevin Eaton, Rob Lockard and Robert Finch; back row—Rob Luma, John Jones, Alice Andes, Tom Wrenn, Mike Frazier, Bob Thomas and Ed Conway.

After several decades, with major innovations and economies of scale to be gained by partnership, Portsmouth and HRSD began to increase cooperation and explore the future. In January 1982, HRSD purchased the North Churchland Force Main in a lease purchase agreement with Portsmouth.

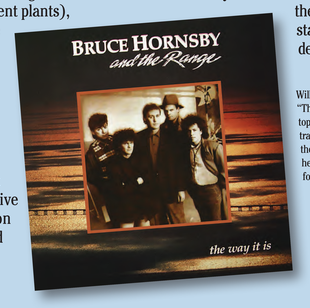
Discussions about Portsmouth joining HRSD emerged in 1984, and a study was authorized to review consolidating Lamberts Point and Pinners Point operations. Approval of an agreement between Portsmouth and HRSD occurred on August 27, 1985. By September 23, 1986, the court order that allowed Portsmouth to become part of the district was issued. On July 1, 1988, HRSD officially assumed operation of the Pinners Point Plant and Portsmouth became a member of HRSD.

The Advent of the Virginia Initiative Process

Changes on the horizon, including facility expansions and the City of Portsmouth's admission to the district, necessitated new ways of doing things. Nutrients had been identified as a problem that contributed to algae blooms and negatively affected the health of the Chesapeake Bay. General Manager Borberg challenged those tasked with designing the upgrade of the Lamberts Point Plant to develop a new, improved treatment process.

Around this time, Congress amended the Clean Water Act of 1972. The Water Quality Act of 1987 (WQA) mandated a new approach to controlling toxic pollutants that tightened controls on point sources (including treatment plants), required states to adopt "numerical criteria" to measure pollutants, established effluent limitations for individual discharges into bodies of water and improved storm water management practices. Further, the Water Quality Act phased out federal grants in exchange for a revolving loan program.

After considerable work and pilot testing, HRSD and its consultant created a seasonal biological nutrient removal process patented in 1989 as the Virginia Initiative Process (VIP). This process was a major innovation that removed substantial quantities of nitrogen and phosphorous at a slightly higher capital cost but at a lower operational cost than conventional treatment.



Virginia Initiative Plant Construction Begins

Construction of a 40 MGD facility to accommodate flows from the Pinners Point and Lamberts Point service areas began in 1987. The new plant would provide secondary treatment with biological nutrient removal, a major added benefit for the environment not required by federal or state regulations. HRSD phased out the Lamberts Point identity, naming the expanded facility the Virginia Initiative Plant as a tribute to the process that placed HRSD at the forefront of efforts to reduce nutrient discharges to the Bay.

The initiative garnered several prestigious awards for engineering excellence and environmental innovation. HRSD and CH2M HILL immediately allowed treatment facilities throughout the world to use the VIP process at no cost, and helped advance state of the art wastewater treatment in the decade to come.

Williamsburg native Bruce Hornsby wrote "The Way It Is," a socially conscious song that topped the charts in 1986. Led by its hit title track, the debut album of Bruce Hornsby and the Range achieved multi-platinum status and helped the group win the 1987 Grammy Award for Best New Artist.

That's just the way it is
Some things will never change
That's just the way it is
Ah, but don't you believe them.