



Hampton/NASA Steam Plant

Background

Hampton/NASA Steam Plant is an award-winning facility that serves Hampton residents, five federal installations, and the private sector. Leaders from Brazil, the Ukraine, Iceland, Japan and other countries have traveled to see it to explore waste-to-energy technology for their communities. The benefits of the steam plant are many. In two decades, it has conserved 90 million gallons of fuel oil and 50 acres of landfill space; saved Hampton millions of dollars in disposal costs; and given NASA low-cost energy to support Langley Research Center (LARC).

The plant operates 24-hours a day, seven days a week & takes up to 240 tons a day.

Completed in 1980 under a unique partnership with the federal government, the facility is undergoing a \$9 million upgrade that will extend the life of the plant and meet new federal Clean Air Act regulations directed at all American refuse-burning facilities. The renovation will be paid for with bonds over a 20-year period.

Improvements underway:

To enhance pollution control capability, not to increase storage or burning capacity

Acid gas scrubbers and fabric filters to enhance air pollution control

Magnets to recover 3,000 tons of metal a year—for scrap metal. (Now it passes through the burning process & is landfilled with ash residue.)

Control room and lab to be relocated and expanded

Work areas configured for larger meetings and reorganizing staff

An elevator installed

Anticipate future needs like carbon injection & auxiliary burners



Hampton/NASA's Joint Board of Oversight added a state-of-the-art system--anticipating future regulations & needs.

How The Steam Plant Works

As part of the city's integrated approach to managing waste, the Steam Plant reduces household waste by roughly 90% while creating energy for LARC. Curbside recycling diverts newsprint, some metals and glass. A regional compost facility and a special disposal program, both operated by Virginia Peninsulas Public Service Authority, remove yard waste and household chemicals from the household waste stream. These efforts offer disposal alternatives for items that do not burn well at the plant.



City refuse trucks and private haulers weigh in on entrance scales, then empty loads in "the pit." A crane operator extracts mattresses; water heaters or other oversized materials and feeds the "seasoned" material into a furnace system that's constantly monitored on camera to ensure a safe, clean burn. The ash that results moves through a cooling trench, and a conveyor belt transports it outside to a truck for disposal at Bethel Landfill, a sanitary landfill.

Environmentally Sound

Our employees are prepared to handle several operations and on-going maintenance. Trash is processed at high temperatures to destroy pathogens and organic chemicals; it's processed within six days to minimize the growth of spores. Ventilation technology reduces odors. The residue from burning is safe to store at a sanitary landfill; it generates no landfill gases and uses one-tenth the landfill space as its original form. All aspects of the process undergo regular scrutiny to meet or exceed environmental standards and regulations. This information is also made available to the public.



The Steam Plant team is highly trained & cross-trained.

Note: the mandated changes are expected to increase Steam Plant utility bills, ongoing maintenance of new systems and reporting to regulators. (ie lime to be used to prevent "acid rain" will cost about \$150,000 a year.) The plant is working hard to minimize the impact of these cost increases on Hampton customers through other cost control initiatives.

Public tours are available through Hampton Waste Watchers and can be specially arranged for groups of no more than 15. For more information on the Steam Plant or other Public Works facilities and programs, contact the Hampton Customer Call Center (3-1-1 or 727-8311) and surf www.hampton.gov/publicworks



Hampton Waste Watchers

TOUR DE TRASH

Tuesday, April 18
9 a.m. – 3 p.m.

Ever wonder where your curbside items go? Trash, recyclables, tires, leaves & grass and bulk waste are each handled by different drivers and vehicles. Find out what happens to them and how you can get the most for your money. Seats are limited for this fun day-long tour. Wear comfortable shoes. Bring a bag lunch. We'll provide beverages and transportation. Pre-registration is required with a \$5 deposit, made out to "City of Hampton (Keep Hampton Green Fund)," returned to tour participants. To reserve a seat call 727-1401.

Hampton Waste Watchers

Hampton Environmental Relations, Hampton Clean City Commission, Langley Air Force Base, Solid Waste Advisory Committee, Virginia Peninsula Public Service Authority & Virginia Cooperative Extension

Tour Highlights

- Find out how to save \$170 a year on solid waste fees.
- Visit the award-winning Hampton/NASA steam plant that converts trash to energy.
- See up close the day-to-day operations at Bethel Landfill.
- Find out why clear bags are important for curbside collection of leaves and grass.
- Learn how recyclables are sorted for markets around the world.
- Put your knowledge to work and help keep collection costs low.

