

A G E N D A

JAMES CITY COUNTY BOARD OF SUPERVISORS

READING FILE

May 9, 2006

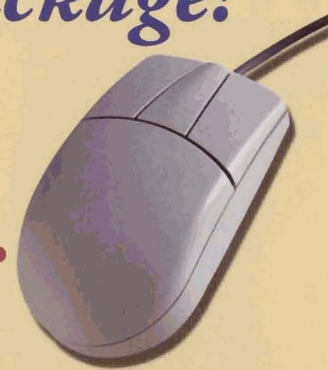
FOR YOUR INFORMATION

1. GoWilliamsburg.com Vacation Packages Brochure
2. Brief History on Grinder Pumps

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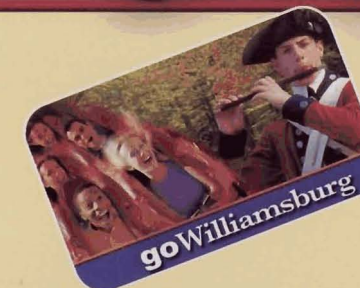
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- **The Revolutionary City.** New for 2006. Colonial Williamsburg's dynamic afternoon program thrusts you into the everyday life and momentous world-changing events of a town at the heart of America's quest for independence.
- Thrills abound at **Busch Gardens Europe** with an all-new Irish show "Emerald Beat," "Curse of DarKastle," a harrowing ride through a castle frozen in time, and "Howl-O-Scream," a Halloween extravaganza.
- In preparation for America's 400th Anniversary, a new gallery, film and revitalized living-history areas will open at **Jamestown Settlement** in late 2006.
- October 19-22, the 225th anniversary of America's decisive Revolutionary War victory at **Yorktown** will be celebrated with "A Salute to the Military."
- New programs and entertainment are scheduled throughout the year at **Merchants Square** and **Riverwalk Landing** featuring unique shopping, dining, art and outdoor activities.



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Book Your Fun Now!

America's Historic Triangle Package **From \$151 per person**

Two or three nights' lodging including a ticket valid for your entire stay to Colonial Williamsburg's Historic Area, Jamestown Settlement, Historic Jamestowne, Yorktown Victory Center and Yorktown Battlefield.

Williamsburg Flex Vacation Package **From \$272 per person**

Choose three, four or five nights' lodging including a flexible ticket valid your entire stay that includes unlimited admissions to Busch Gardens Europe, Colonial Williamsburg's Historic Area, Jamestown Settlement, Historic Jamestowne, Yorktown Victory Center, Yorktown Battlefield and Water Country USA.

Family Fun Package **From \$194 per**

Two nights' lodging and admission to Colonial Williamsburg's Historic Area, Busch Gardens Europe and Water Country USA for three consecutive days. You can bounce between European countries at Busch Gardens, explore 18th-century Colonial Williamsburg and splash down at Water Country USA.

Yorktown's 225th Anniversary Package **From \$120 per person**

This Revolutionary War victory at Yorktown will be celebrated October 19-22 with "A Salute to the Military." Ceremonies, live performances, fireworks and more can be enjoyed during this three-day event. This two- or three- night package includes a Yorktown Passport and a commemorative gift of the event.

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More Fun ...

History is Fun Package **From \$ 96 per person**

Take hold of America's beginnings from 1607 to 1781 with one ticket to Jamestown Settlement and Yorktown Victory Center. Complete with 2 nights' lodging.

Golf Package **From \$169 per person**

Williamsburg is fast becoming one of the nation's top golf destinations boasting more than a dozen courses. We invite you to test your skills on courses that have challenged the champions of the PGA, LPGA and USGA. Call 1-800-FORGOLF (367-4653) for additional packages

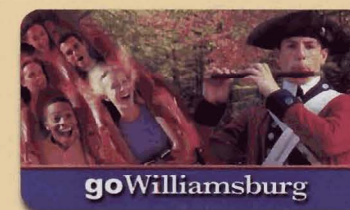
Passport to Yorktown Package **From \$107 per person**

This two-night package provides a Yorktown passport which includes one ticket to Yorktown Battlefield, Yorktown Victory Center and the Watermen's Museum.

Howl-O-Scream Package **From \$141 per person**

Busch Gardens Europe transforms into monstrous mayhem after dark featuring haunted houses, themed shows, monster mashes and scare zones. The haunting begins September 15 and continues every Friday, Saturday and Sunday through October. Includes two nights' lodging.

2006 prices are per person based on double occupancy and include one admission per adult, excluding taxes.



Book now and receive a free goWilliamsburg Discount Card that offers tremendous savings at participating retailers, restaurants and more.

2006 Godspeed Sail



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MEMORANDUM

DATE: May 9, 2006

TO: The Board of Directors

FROM: Larry M. Foster, General Manager, James City Service Authority

SUBJECT: Brief History on Grinder Pumps

Introduction

The Board asked that a brief report on grinder pumps be prepared. The report was requested in response to questions raised at the April 25, 2006, public hearing on the Fiscal Year 2007-2008 Budget. The public hearing was held to receive public comments on a proposal that is included in the budget to increase the annual grinder pump maintenance fees from \$145 to \$210 per year.

What is a Grinder Pump?

Grinder Pumps are small sewer pumping stations that serve individual structures and are used when gravity sewer is not available. This is usually the result of the topography in the area - too flat or steep. The James City Service Authority (JCSA) provides maintenance to approximately 750 grinder pumps on a voluntary basis. The grinder pump belongs to the property owner much like a heat pump that serves the home. Grinder pumps serving commercial buildings obtain service for their apparatus from the private sector. Surrounding jurisdictions do not provide a grinder pump maintenance service.

Background

Grinder pumps were first introduced to James City County in the mid 1970s in the Kingsmill Development. Approximately 230 of the early owners paid a perpetual maintenance fee of \$300 and eventually \$600. In the mid-1980s, the JCSA stopped providing grinder pump maintenance but in the early 1990s resumed the service subject to the payment of an annual maintenance fee that would be collected in equal increments with the JCSA service invoice. The fee is based on the costs of providing the service distributed over all grinder pumps that participate in the maintenance program. A recent customer described the fee as an "insurance policy." The average costs of responding to a grinder pump failure are approximately \$1,000. The last fee increase was approved in 2001.

Why does the JCSA provide Grinder Pump Maintenance?

This question has been pondered by staff for a long time. Ultimately, I accept responsibility for the JCSA continuing to provide the service. I am not comfortable that the private sector will provide the level of service provided by the JCSA. If a grinder pump failure is not promptly addressed, raw sewage will be discharged. A typical grinder pump call for service is addressed by the JCSA within two hours. When responding, the JCSA 1) replaces the pump; 2) repairs the failed pump; and 3) deploys it to another location when another failure is reported. JCSA staff is evaluating outsourcing the service to a private vendor with the JCSA administering the contract. A proposal should come forward to the Board of Directors in the July/August 2006 time frame.

What's covered by the Maintenance Agreement?

A complete grinder pump system includes a containment can and pump apparatus at a cost of approximately \$6,000. The installed cost is approximately \$12,000. The pump assembly costs approximately \$3,000 and has an expected lifespan of 10-12 years. The JCSA advised maintenance agreement customers approximately three years ago that the maintenance agreement only covers the pump. We have had customers expecting the JCSA to replace the storage can after trees and vehicles had damaged the unit beyond repair.

What have we learned?

Proper installation is critical to ensuring dependable service from a grinder pump. To ensure proper installation, the JCSA inspects **all** residential grinder pumps while they are being installed, even though there has been no indication from the eventual homeowner that a grinder pump maintenance agreement will be obtained. The containment can must be anchored, leveled, backfilled, and properly graded. For safety reasons, electrical switches must be near the containment can. The JCSA has standardized an Environment One grinder pump to minimize the pumps and parts inventory necessary to provide a maintenance program.

How does it work?

A grinder pump collects sewage in the containment can via gravity flow from the structure served until the liquid triggers a sensor that activates the pump. Once the pump is activated, the sewage is emulsified and pumped to the nearest public sewer line, which can be a gravity or force main. As an example, the Kingspoint and Drummonds Field sewer systems exclusively use a force main sewer system. Most of the remaining grinder pumps in the JCSA service area pump to gravity sewer mains.

How do we decide where grinder pumps will be installed?

The JCSA's preference is not to have grinder pumps at all. There are times that the choices are difficult. Considerations for whether or not to allow grinder pumps include:

1. Installation of very deep gravity sewer lines which are difficult to maintain
2. Installing multiple small pumping stations that only serve a few lots increasing overall maintenance costs
3. Installing grinder pumps
4. Not building on the property

The JCSA's engineers carefully review development plans making decisions on the above options with the ultimate objective to minimize the number of grinder pumps that will be installed.

From a new development prospective that addresses a relatively large project and likely requires a rezoning, the JCSA is provided a sewer master plan that defines in very general terms where sewer lines and pump stations will be located in relationship to future lots. The master plan identifies general areas where grinder pumps might be located. At this stage, projects are dynamic/conceptual and usually change before being finalized.

When plans to subdivide the property are submitted, the JCSA's engineering staff compares the subdivision plan to the Sewer Master Plan for consistency. At this point, there is adequate information for the JCSA engineering staff to make professional judgments, with consideration of the above options, on how individual lots will be provided public sewer service. Typically by this stage the project has received all Board of Supervisors' approvals. A rule of thumb by the JCSA Engineering Staff is to expect no more than 5 percent of the total lots using grinder pumps. A review of approved site plans that are in various stages of development indicates that of _____ approved lots, 218 (____%) lots will require a grinder pump.

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Settler's Mill Subdivision

At the April 25, 2006, Board meeting, two residents of the Settler's Mill neighborhood made the following comments relating to grinder pumps serving their street.

1. Requested that the JCSA install a gravity sewer to Wood Lawn Circle; and
2. Questioned the alarm control specifications for grinder pumps in James City County.

The Settler's Mill neighborhood was developed in the mid 1990s and consists of approximately 200 homes. Because of its location in proximity to public sewer, approximately 60 percent of the homes are served by grinder pumps. This is a function of the topography of the development and the depth of the existing gravity sewer lines that were available, off-site, when the neighborhood was developed.

1. All of the 9 homes located on Wood Pond Circle are served by grinder pumps. It appears that 4-5 of the homes could have been served by gravity sewer at a cost today of approximately \$70,000. Why weren't they? It is always easy to look back and question decisions made years earlier. The street follows a ridge line with the lots sloping away from the sewer line. I expect that since it was evident that 3-4 of the lots could not be served by gravity sewer, and most of the lots could accommodate exposed basements to the rear that could not be served by the gravity sewer in the street, a decision was made to provide sewer service via grinder pump to make public sewer service available to possible basements in future homes.

One of the Settler's Mill speakers suggested that because his home was served by a grinder pump then the home's value was reduced. If the speaker's premise that the grinder pump sewer system reduced the value of his home is correct, the same reduced value would be realized each time the property is purchased.

2. Grinder Pumps have alarms that flash when the pump is failing and are generally located in garages. Many years ago prior to all current staff, the JCSA chose to modify the standard alarm design for grinder pumps. The design allows for two electrical circuits: one serving the pump, and the other serving the alarm. Therefore, if the pump circuit fails the alarm continues to work. The standard design depends on one electrical circuit and a battery-operated alarm; if the pump/alarm circuit fails; the battery activates the alarm. This works well as long as the battery is maintained and functions. Again, questioning the basis for a decision that was made years ago is always difficult. It appears that the battery was eliminated and the second alarm circuit added to eliminate the dependence on a battery that requires someone to provide regular maintenance. I can only speak for myself, but I would likely forget to maintain the battery; therefore, no alarm would be available. However; there is no right or wrong to either option. Staff has no problem allowing the current manufacturers design.

Service during extended electricity outages

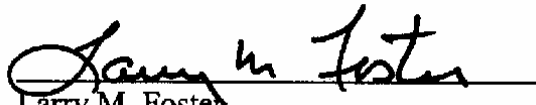
As experienced during Hurricane Isabel, the JCSA does not have adequate resources to assure service to grinder pumps during extended power outages. In essence, supporting the 750 homes with grinder pump maintenance agreements using pump and haul services would not leave adequate staff and other resources to maintain the remainder of the JCSA's infrastructure that supports the remaining 16,500 JCSA customers. A quick connect for a mobile generator to pump out the grinder pump would improve efficiency but not adequately ensure appropriate staff levels for other essential functions.

Two letters have been mailed to grinder pump customers in recent years. One was mailed about three years ago advising JCSA grinder pump maintenance customers of the JCSA limitations in this area. The second letter advising JCSA customers of the proposed rate increase was sent in March 2006. Both letters suggested that the customer investigate installing a generator to support their grinder pump during extended electricity outages.

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Larry M. Foster

LMF/gs

grindpumphistory.mem