Mathews Transmission Force Main Connection Policy for Gloucester County



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### 1.0 Purpose and Need

In September 2009, the Hampton Roads Sanitation District (HRSD) and Gloucester County (the County) entered into an "Agreement for the Maintenance and Operation of the Mathews Sewer Transmission Force Main in Gloucester County, Virginia." As part of the agreement, a mutually agreeable Connection Policy outlining the procedure for new connections to the Mathews Transmission Force Main (TFM) must be developed. This document is intended to fulfill the Connection Policy required in the agreement.

The Mathews County Wastewater Treatment Plant was taken off-line in May 2011 and the flow was diverted to the York River Treatment Plant. The Mathews TFM is designed as a high pressure transmission force main for the purpose of conveying wastewater from the Mathews County Treatment Plant to the York River Treatment Plant. This TFM will operate in excess of HRSD's normal pressure policy.

HRSD has agreed to provide Gloucester County with a limited amount of capacity in the TFM. HRSD shall permit connections by and within the County with up to a total flow of 200 Equivalent Residential Units (ERU), as defined in the Regional Design Guidelines. If additional capacity is requested by the County, additional analysis will be required. Additionally, from the approved agreement, the Ware Academy will be permitted to connect to the TFM and all flow from this station and any other existing properties connected to the Ware Academy force main will not count towards the 200 ERU maximum.

All new connections to the HRSD TFM shall be made at designated locations where branch valves have been provided in the TFM design. No "wet taps" or any other direct connections at other locations will be permitted. Gloucester County and HRSD specifically reviewed these locations prior to construction and agreed to these future connection points to the HRSD TFM. Minimum pump station size shall be greater than or equal to a flow of 100 ERUs. Small grinder pump stations and stations with design flows below 100 ERUs will not be permitted to connect to the TFM. The identified connection points were constructed during the installation of the line at HRSD's cost. New pump stations must be approved by HRSD to connect to the TFM and meet HRSD's Standards and Preferences for pump station design. HRSD will review and have approval authority for all pump station designs. A Flow Acceptance Letter will not be issued until HRSD approves the pump station design. DEQ will not issue a Certificate To Construct and construction shall not commence without the Flow Acceptance Letter.

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HRSD reserves the right to inspect all phases of pump station construction. If necessary changes are required during construction to meet HRSD standards, HRSD can provide work order directives to address the discrepancy. For new developments desiring to connect to the TFM, the County will own, operate and maintain the collection system within its right-of-way up to the first manhole outside of the receiving pump station. The first manhole, the gravity line to the wet well, pump station and force main to the TFM, will be owned, operated and maintained by HRSD. Upon satisfactory completion of construction, meeting all applicable regulations, Connection Policies and the County's approval to convey, HRSD will assume ownership and responsibility for operation of the pump station. The following items must be properly addressed prior to transfer to HRSD:

- The County must request, through the HRSD General Manager, transfer of ownership of the pump station.
- ii. Fee simple title of all pump station land, including the access driveway, shall be legally transferred and duly recorded at the Gloucester County Clerk of Court.
- iii. All easements shall be properly dedicated to HRSD.
- iv. A CTO shall be obtained from the Virginia Department of Environmental Quality and provided to HRSD and all other regulatory approvals shall be received by Gloucester County prior to transfer to HRSD.
- v. All construction punch list items must be corrected to the satisfaction of HRSD.
- vi. As-built record drawing and valve guides shall be completed to the satisfaction of HRSD.
- vii. Field Training and Operations Manuals shall be provided.

HRSD will reimburse the County the Cost Differential in capital costs for any future pump stations connected to the TFM in accordance with this Connection Policy. Additionally, from the approved agreement, HRSD will not own or operate the pump station and force main from the Ware Academy and will not pay any cost differential to the County for this connection.

The Cost Differential shall be the difference in capital costs between designing to HRSD's pressure policy for the York River Treatment Plant and the TFM design pressures. HRSD will only be reimbursing for the additional cost to connect to the higher pressure line. The Cost Differential analysis will require that the County, or the design engineer, submit to HRSD two detailed cost estimates prior to design approval. One cost estimate will detail the cost for designing to pressure policy of

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the York River Treatment Plant, and the second estimate will detail the cost for designing to the TFM pressures. HRSD shall use its sole reasonable discretion in approving any such cost differential.

### 2.0 Definitions

"Transmission Force Main" means a force main that is intended for the conveyance of wastewater rather than the collection of wastewater. The operating pressure of a Transmission Force Main is higher than allowed by HRSD's pressure policy for an Interceptor Force Main.

## 3.0 **Guiding Principles**

HRSD has constructed a pressure TFM that is located through a portion of Gloucester County. The Gloucester County Board of Supervisors has requested that they have the ability to connect into this line. In an effort to meet the County's needs as expressed in its Board of Supervisors Resolution, this Agreement between HRSD and Gloucester County is intended to effect a mutually beneficial agreement between the two parties.

## 4.0 Procedures

#### Design:

- The pump station will be designed to HRSD's standards
- A Project Initiation Form will be submitted to HRSD Development Services
- A pressure analysis for the design basis is to be done by HRSD Development Services
- The engineer will submit 5 sets of 30%, 60%, 90% and final construction drawings and specifications to HRSD for approval
- Construction Submittals for review will include: New Pump Station design, New Forcemain with profiles, construction design, and specifications
- Flow Acceptance Letter is required in accordance with HRSD's development plan during force main and pump station design phase

#### Agreement:

 HRSD will reimburse the County as agreed once the pump station is turned over to HRSD. Reimbursement will be paid on a one time lump

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- sum basis, and will only include the additional cost to connect to the high pressure force main
- As stated in Section 1.0, HRSD will own the pump station to the first manhole outside of the station and the force main to the connection with the TFM
- As-builts, O&M and punch lists will be completed to the satisfaction of HRSD and are to be submitted prior to HRSD taking ownership of the pump station and force main
- Valve guides and As-built record drawings must be completed to the satisfaction of HRSD

# 5.0 Responsibility and Authority

The Operations and Engineering Department's will be responsible for overseeing the design of the pump stations and force mains to ensure that they meet HRSD's standards. The Operations Department will be responsible for the operations and maintenance of all HRSD pump stations and force mains that connect to the TFM.

Approved:	Godan Land	9.25.12
	Vishnu K. Lakdawala, Ph.D. Commission Chairman	Date
	<b>N</b> .	
Attest:	Salatron	9.25.12
	Jennifer L. Heilman	Date
	Commission Secretary	

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### FIGURE 1

