

## **EXHIBIT A - REGIONAL DESIGN GUIDELINES**

HRSD and the Hampton Roads Localities agree to develop a Regional Wet Weather Management Plan that will define improvements in the Localities' and HRSD's systems necessary to manage peak wet weather flows. The design capacity and system performance data required to develop the Wet Weather Management Plan (flow monitoring, SCADA data, system mapping, calibrated hydraulic models, etc.) will be developed through fulfillment of the consent order requirements in accordance with mutually agreed upon regional standards. The Regional Wet Weather Management Plan will analyze system performance for existing and future peak flows under a range of hydrologic conditions, define improvements necessary to achieve mutually acceptable level of service and establish an implementation schedule for constructing those improvements. It is anticipated that completing the improvements is a long-term endeavor.

In the interim, as part of the consent order obligations, HRSD and the Localities will be conducting sewer system evaluations in their individual systems to identify and characterize sources of infiltration and inflow (I/I). This inspection work will be information based utilizing system performance data to focus on those areas that contribute the most extraneous flow. The results of the inspection program will be used to develop and implement prioritized rehabilitation plans focused on reducing peak flows. Corrective actions will include short term, high gain activities (i.e., removal of areas drains, installing manhole inserts and clean out caps, minor point repairs), where appropriate, to reduce inflow. Other more substantial rehabilitation efforts (such as pipe replacement or lining) will be implemented in accordance with a schedule to be determined as an output of the consent order.

Until the Regional Wet Weather Management Plan is complete, design of any new or enhanced major sewer infrastructure (i.e., regional pump stations, major interceptors, etc.) must anticipate the future performance standards that will result from the outputs of the consent order. HRSD agrees to revisit its design standard for interceptors that may be designed and constructed prior to the Regional Wet Weather Management Plan.

The regional design standards will be based on the following assumptions:

- Peak hourly residential wastewater flow of 250 gallons per capita per day at an assumed 3.1 persons per household, or 775 gallons per residential unit per day; plus
- Peak hourly commercial/industrial wastewater flow will be based on actual flow if available or 3 times the average projected water consumption if not available
- The relationship of peak water consumption and peak wastewater is assumed to be: 3 X water consumption = 2.5 X wastewater flow

HRSD, the Hampton Roads Localities and DEQ agree to adopt these standards for design.