

**Attachment 2A
MEETING SUMMARY
DIRECTORS OF UTILITIES COMMITTEE
March 7, 2012
Newport News**

1. Summary of February 1, 2012 Meeting of the Directors of Utilities Committee

There were no comments on, or revisions to the summary of the February 1, 2012 Committee meeting.

ACTION: The summary of the February 1, 2012 meeting of the Directors of Utilities Committee meeting was approved.

2. HRPDC Regional Socio-Economic Analysis

Mr. Greg Grootendorst, HRPDC Chief Economist, briefed the Committee on the commencement of the Hampton Roads Regional Socio-Economic Analysis, which is the first step toward preparation of the 2040 Hampton Roads Long-Range Transportation Plan. Mr. Grootendorst summarized the five forecast elements required by the Federal Highways Administration: population, employment by place of work, employment by place of residence, households, and vehicles. Regional-level projections will be developed based on locality comprehensive plans. It was clarified that localities' designated development areas provide traffic analysis zone (TAZ) level input to the regional model. Mr. Grootendorst noted that, in the past, these population projections have been used for non-transportation related planning and asked the utilities to think about their long-term projections and contact him with any specific needs or clarifications that could potentially be incorporated into the 2040 projections. In the June/July timeframe, HRPDC staff will be working with locality planning staff to distribute projected totals to jurisdictions.

The Committee discussed the relationship of population projections to infrastructure planning and the need for a better methodology to more accurately capture water use trends and future demands. It is very difficult to prepare demand projections beyond the five-year timeframe, and rate estimates are further complicated by variables such as price elasticity, rainfall, and socio-economic factors. Going forward, utilities require better information to relate population to water demands.

Newport News Waterworks is beginning a project to mine customer water use data to identify residential consumption trends the degree to which water conservation fixtures have penetrated the market. Water use trends will be examined along with changes in the housing/building industry to look at how new housing and the turn-over of older product can be correlated to changes in per-capita use.

HRSD is also beginning a study with the College of William and Mary to examine water demand decay and trends in per-capita water use, with the goal of more accurate projections of future wastewater flows for properly sized infrastructure.

ACTION: No action.

3. Special Order by Consent

Mr. Richard Stahr, Brown and Caldwell, provided a presentation on recent efforts of the Capacity Team on the Special Order by Consent for sanitary sewer system overflows. Information was provided on unresolved issues, potential impacts to schedule and compliance issues, and a proposed path forward in preparation for a March 12, 2012 meeting with the Department of Environmental Quality (DEQ) and the Environmental Protection Agency to discuss technical issues.

The Committee reviewed the details of the unresolved issues, including system degradation and regional equity, that they felt should be discussed at the March 12, 2012 meeting.

ACTION: No action.

4. HRSD Brief to CAOs

Mr. Ted Henifin, HRSD, briefed the Committee on a presentation to be provided to locality Chief Administrative Officers (CAOs) at their meeting on March 15, 2012 regarding the Special Order by Consent, regional equity, and cost effective solutions. This presentation is being made at the request of the CAOs and will include a review of background information, alternatives, and a suggested study to combine local sewer systems with HRSD to form one regional system. The Committee discussed the timing of the March 12 meeting with DEQ and EPA and the March 15 meeting with the CAOs and the coordination of key messages regarding unresolved issues and potential solutions.

ACTION: No action.

5. EPA Draft Framework for Integrated Stormwater and Wastewater Planning

The EPA has completed the stakeholder listening sessions for the integrated stormwater and wastewater planning framework, which is an initiative being promoted by the agency to support communities in meeting Clean Water Act obligations. The EPA has shown interest in supporting case studies based on the proposed framework. The Committee discussed the outcomes from the listening sessions and relationship to the ongoing TMDL and wastewater work, as well as the March 12 and 15 meetings with DEQ/EPA and CAOs, respectively.

ACTION: No action.

6. Staff Reports

- **FY 2012-2013 Water and Wastewater Program Budgets:** HRPDC staff summarized the endorsement of program budgets. HRPDC staff is following-up with the three localities that have yet to respond.
- **Director of Utilities Committee Special Meeting:** The Committee agreed that the special meeting to review the water and wastewater work programs, program goals, and future program budgets will be held at 9 a.m. on June 14, 2012. HRPDC staff will confirm a location and send out a meeting announcement.

ACTION: No action.

7. Other Business

- Mr. Jim Walski, City of Chesapeake Public Utilities Director retired on February 29, 2012. The Committee recognizes his service and thanks him for his contributions to the water and wastewater programs in the region.

ACTION: No action.

Committee Meeting Sign-In Sheet
 March 7, 2012

Attachment 2B

Locality/Agency	Representative	Representative	Representative	Representative
HRSD	Ted Henifin	Phil Hubbard		
Chesapeake	Bill Meyer			
Franklin				
Gloucester	Martin Schlesinger			
Hampton	Anthony Reyes	Lynn E. Allsbrook	Jason Mitchell	
Isle of Wight				
James City County	Larry Foster			
Newport News	Reed Fowler	Everett Skipper	Joe Du Rant	
Newport News	Brian Ramaley			
Norfolk	Eric Tucker			
Poquoson	Ellen Roberts	Bob Speechley		
Portsmouth	Bryan Foster	Erin Trimyer		
Smithfield				
Southampton				
Suffolk	Craig Zieseimer			
Surry				
Virginia Beach	Tom Leahy			
Williamsburg				
Windsor				
York	Brian Woodward			
HRPDC	John Carlock	Greg Grootendorst		
HRPDC	Whitney Katchmark	Jennifer Tribo	Tiffany Smith	
New Kent				
DEQ				
EPA				
USGS				
VDH				
VDH				
AECOM				
AquaLaw				
Brown & Caldwell	Richard Stahr			
CH2M-Hill				
Christian Barton				
CNA				
Hurt & Proffitt, Inc.				
McGuire Woods				
REMSA				
Troutman Sanders				
URS				
Watermark Risk Management				

Hampton Roads Regional Wet Weather Management Program EPA Update Meeting

March 12, 2012

Original Special Order by Consent

- A balanced deal:
 - Localities to use rehab/local system capacity improvements to reduce their peak flows to the peak flow threshold (PFT)
 - HRSD to build larger infrastructure to handle more flow
- RWWMP relies upon the Localities' peak flow commitments to size capacity improvements.
- No set schedules in SOC for the Rehab Plan or Regional Wet Weather Management Plan (RWWMP) execution. Schedules in approved plans.
- Affordability was a consideration in setting schedules- NOT scope or level of service

Major Themes – Cost Effectiveness

- Regional cost effectiveness was a major theme of order as drafted.
 - ⇒ Localities did not want to be locked into rehab beyond point of cost effectiveness – desired options other than just rehab
 - ⇒ HRSD did not want to build infrastructure to convey and treat excessive amounts of storm water
 - ⇒ PFT was negotiated with this background

Major Themes – Regional Equity

- Equity among the Localities was a major theme as the order was drafted.
 - ⇒ No one Locality wanted to be singled out having to do more than other localities
 - ⇒ Cost/affordability was not used as equitable basis as each system had been maintained to different standards, constructed at different times, etc,...
 - ⇒ Equity was defined as level of effort to achieve PFT in all basins

Major Themes – Cooperation

- After years of finger pointing between HRSD and Localities, region desired a cooperative solution that established clear lines of accountability.
 - ⇒ If Locality delivers up to PFT, HRSD is expected to convey and treat without creating pressure/SSO issues in locality
 - ⇒ SSO responsibility clearly defined by system design and operation parameters

Cost Effective Solutions Peak Flow Threshold

- Region wanted to limit SSES basins to ones that really needed work. SOC/RTS included a negotiated benchmark to define which sewer basins would be studied further
 - ⇒ “Peak Flow Threshold means the calculated flow of 775 gallons per day per existing residential unit plus 3 times commercial water consumption plus actual major commercial and industrial (100,000 gpd and greater) flows.”

SOC -Section 7 Rehab Planning

- If projected peak flow is above PFT, “Locality shall assess the cost and feasibility of reaching PFT”
 - ➔ If it is not cost effective and/or feasible to achieve the PFT “the Locality shall develop costs, and estimate the peak flow levels that can be achieved”
- If projected peak flow is below PFT, “Locality shall develop a rehabilitation plan to correct significant defects and reduce I/I to the extent that it is cost effective and feasible”
- “In any case, the Locality shall make an affirmative commitment, which will be relied upon in the RWWMP, in terms of post rehabilitation peak flow in all SSES basins at the specified level of service”

SOC -Section 7 Rehab Planning

Section 7.1 of the RTS:

“In cases where rehabilitation or replacement is not projected to reduce peak flow to within the peak flow threshold, an alternative analysis shall be conducted cooperatively between the Locality and HRSD to identify cost effective capacity enhancements. Such enhancements shall be included as part of the RWWMP described in Section 8. The construction of capital improvements and modified operational schemes to increase the capacity of the regional sanitary sewer system and manage peak flows shall be coordinated between the Locality responsible for the improvement and HRSD.”

SOC/RTS Rehabilitation Planning

- Not prescriptive in order – performance based standard
- Method and extent required to achieve PFT left open ended
 - ⇒ Basins vary greatly across the region
 - Topography
 - Hydrology
 - Existing conditions
 - ⇒ Accounts for local preferences
 - Types of rehab, etc

SOC/RTS Rehabilitation Planning

- Capacity team focused on standardizing rehabilitation planning process to address concerns about regional equity
- Numerous concepts were developed to clarify SOC requirements
 - ⇒ Business rules
- Region wanted enforceable requirements
 - ⇒ Amended Section 7

Recent History

- Business Rules – developed between December 2009 and July 2011
- Led to Amended Section 7 which failed to gain universal Locality support in November 2011
- Summer 2011 – Small group Locality meetings to discuss flow loading approach followed by full Capacity Team meetings
- October 2011 – Meeting with DEQ and small group Localities to review approach
- November 2011 – EPA/DEQ RHM Workshop to discuss approach and progress

Recent History Cont'd

- November 15, 2011 – DEQ requests information on flows
- November 21, 2011 – HRSD responds to DEQ request
- January 20, 2012 – DEQ asks further questions
- January 30, 2012 – DEQ attends expanded Capacity Team meeting to review their position on the issues
- January 30, February 6, 13, 21, 27 – Capacity Team meetings to attempt to reach resolution of issues

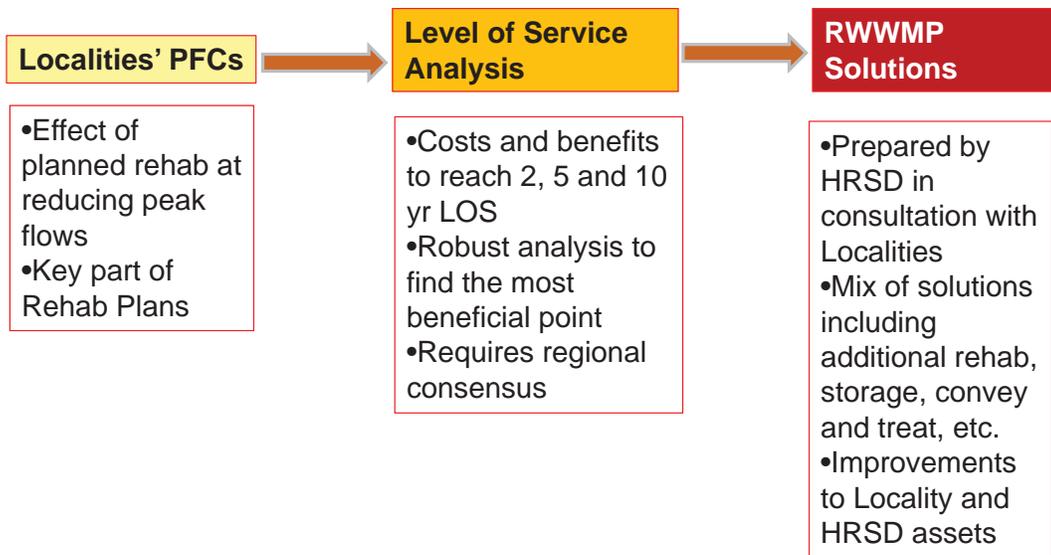
Original Intent and Themes Obscured by Details/Reality/Economy

- Modifications to Section 7
- DEQ comments about affordability – doing more than required
- Many more SSES basins than originally anticipated
- 4 years of data gathering, study, analysis, modeling – down deep in the weeds

Regional Issues Under Discussion

1. Relationship Between Locality Peak Flow Commitments, Level of Service Analysis and RWWMP Solutions
2. Loading flows into the Regional Hydraulic Model Using Hydrology
3. Concurrent Rehab Plan and RWWMP
4. Allocation of RWWMP Costs

Locality PFCs, LOS Analysis and RWWMP Solutions



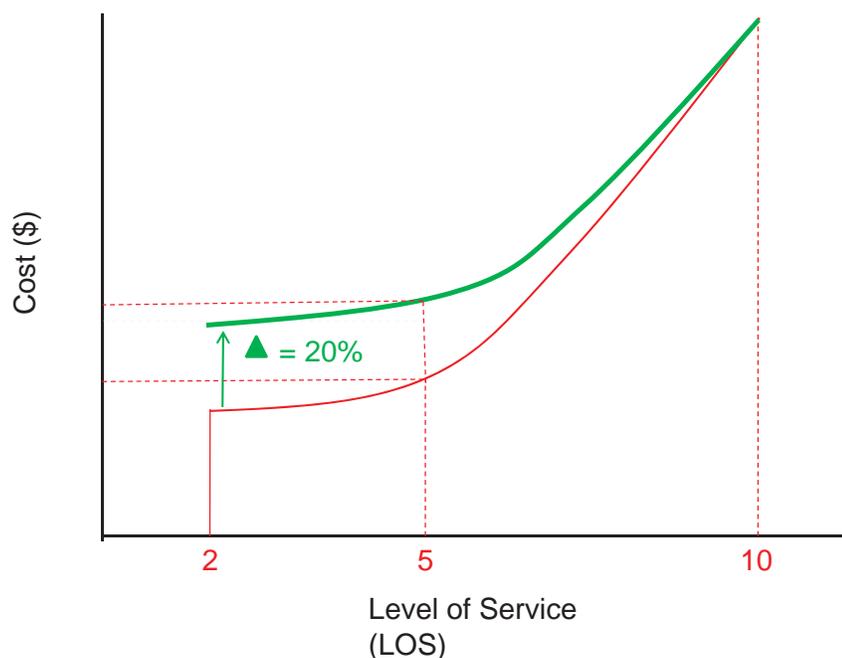
Localities PFCs are Key to Success of RWWMP

- Downstream infrastructure will be sized relying upon the PFCs
- Planned PFCs may vary from actual
- Agreement between HRSD and Locality will require the long term maintenance of the PFC
- SOC requires PFC for SSES basins

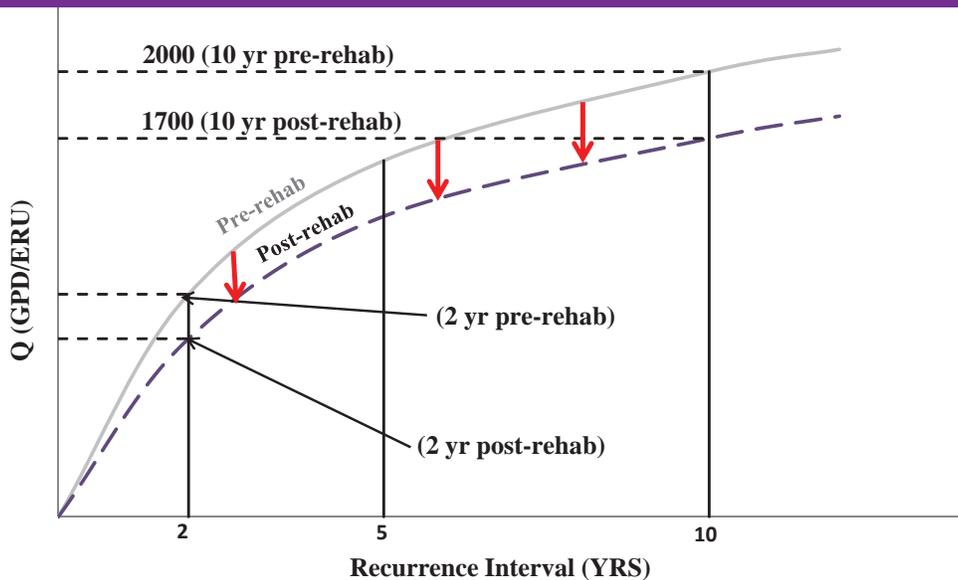
Flows are Loaded into the RHM Hydrologically

- RTS Section 6 requires the use of hydrology to define wet weather flows
- Flows from SSES basins are being loaded using hydrology (10 yr > 5 yr > 2 yr)
- New, future growth basins are being loaded in hydrologically (775 gpd/eru @ 10 yr, 712 gpd/eru @ 5yr & 623 gpd/eru for 2 yr) – HRSD concerned this is potentially overly conservative
- DEQ expressed concerns about design standards and wants regional agreement
- Capacity Team endorses hydrologic approach as technically sound for the capacity assessment and RWWMP

Loading Flows at a Minimum of 775 Creates is Unrealistically Conservative and Expensive



Basin Rehab Using Hydrologic Approach will be Used in the RWWMP



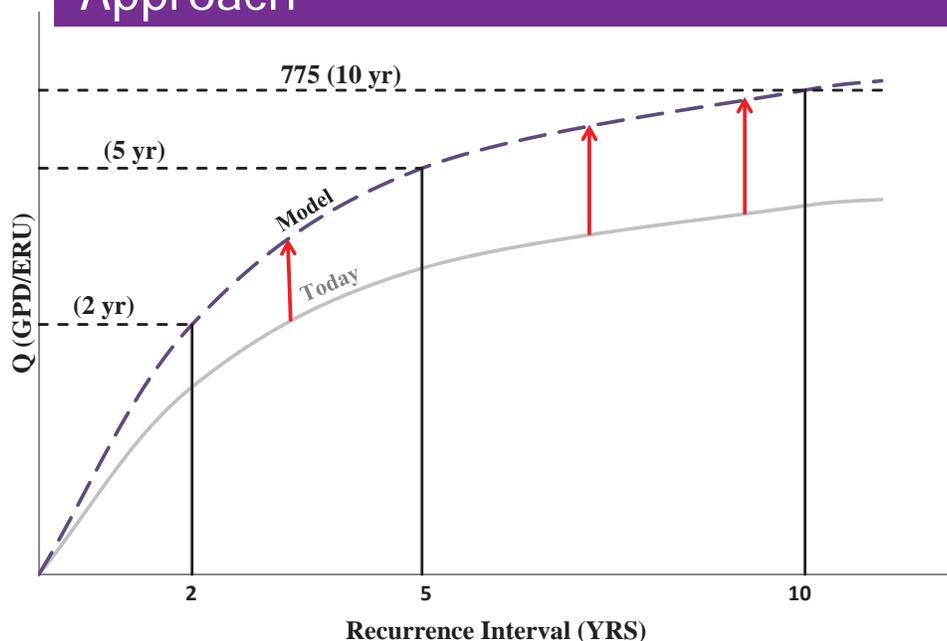
Conservatism in Future Flows and Degradation in Non SSES Basins

- Current RHM has degradation of non SSES basins to 775 gpd/eru
- For some basins, this represents a greater than 200% increase in flows
- This approach adds more than 60 MGD to the regional system
- This is a remnant of the business rules concept and amended section 7
- In general, the future flows in the RHM appear to be too high when contrasted with past 15 year experience of flow decreases despite increase in population

Overstated future flow conditions

- Degradation, new population flows, conservative rehab projections
- Locality concerns about “Peak Flow Commitments” and HRSD enforceable flow agreements lead to conservative projections
 - ⇒ Each locality trying to ensure enough capacity for anything that may come in future
 - ⇒ Impact on regional system magnified by 13 localities all adding conservative factors – regional system needs to accommodate all flows
- HRSD very concerned that regional infrastructure will be unnecessarily oversized – wasting valuable societal resources

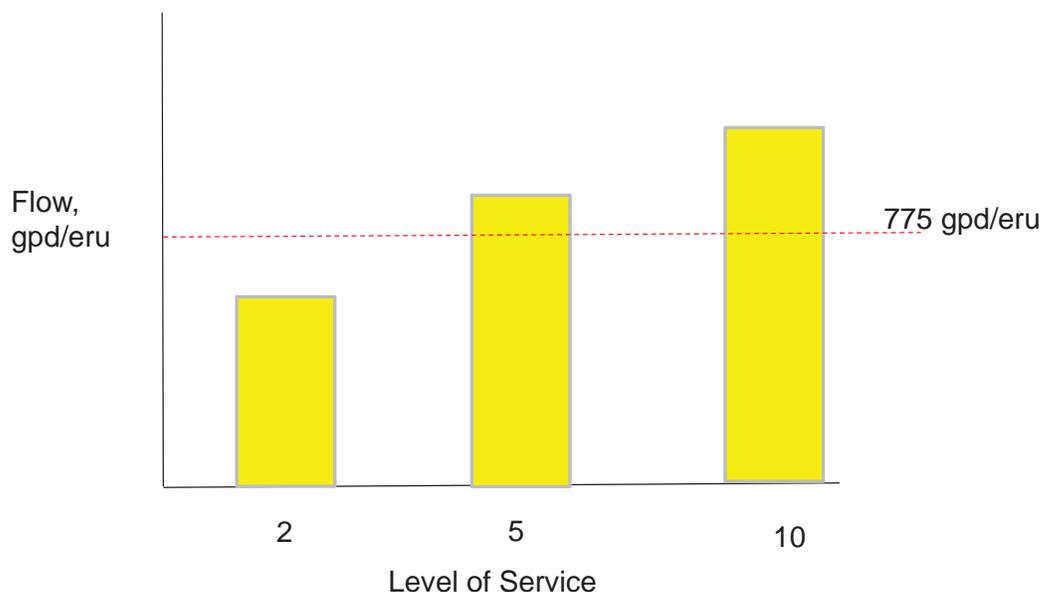
Basin Degradation Using Hydrologic Approach



Concurrent Rehab Plans and RWWMP

- DEQ believes that concurrent preparation of the Rehab Plans and RWWMP will better facilitate the identification of the most cost effective solution
- HRSD must have Peak Flow Commitments not later than November 2012 (SOC/RTS required output of Rehabilitation Plan) to load model to develop RWWMP alternatives

DEQ has Proposed Variable Rehab Plans with Varying PFCs



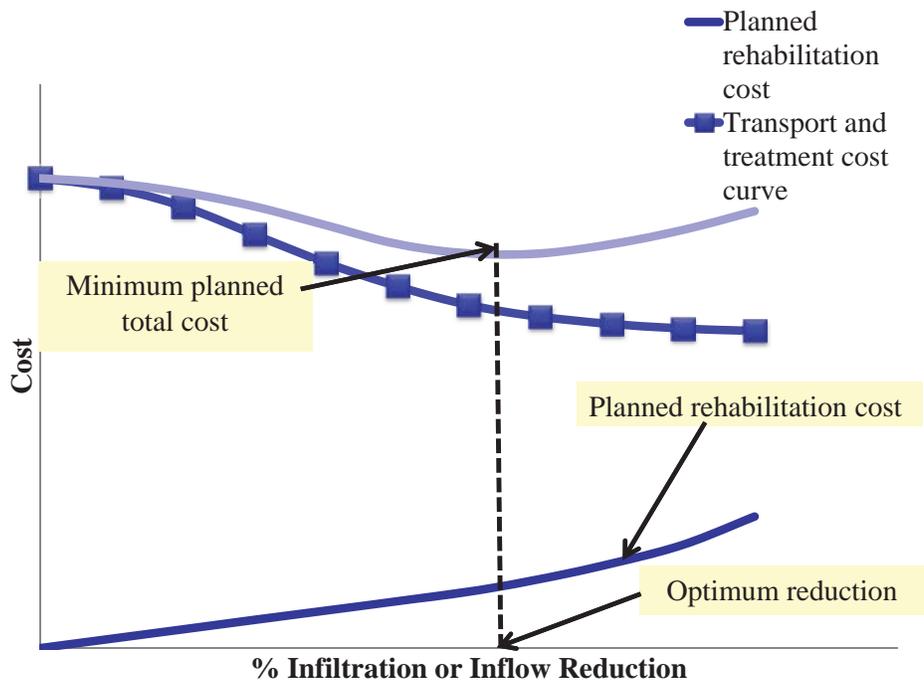
Concurrent Rehab Plans and RWWMP

- DEQ proposes a one year extension to the Rehab Plan submittal date
- All issues are connected and must be resolved prior to getting unanimous approval
- Changes to RTS are required to prevent future misunderstandings

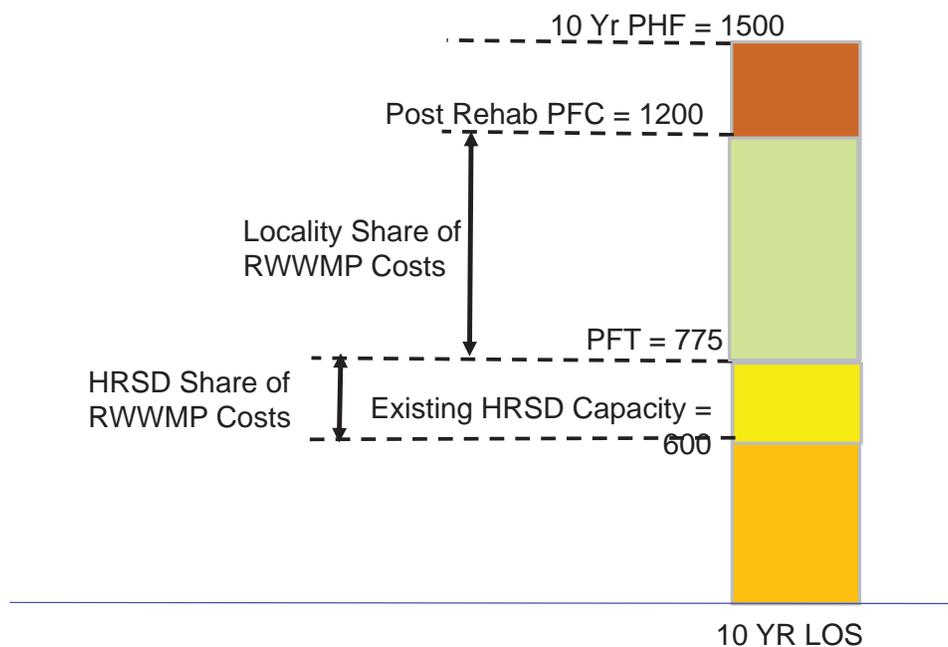
Proposed Path Forward

- Locality prepares Rehab Plan with PFCs
- PFC submitted to DEQ and HRSD NLT November 2012
- HRSD manages flows remaining after PFC in RWWMP

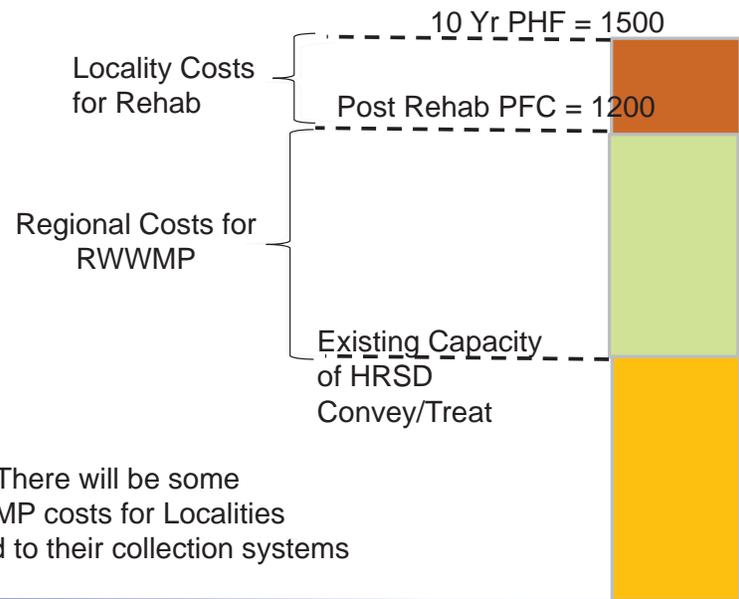
Best Value for Ratepayers is a Balance of Rehab and Conveyance and Treatment



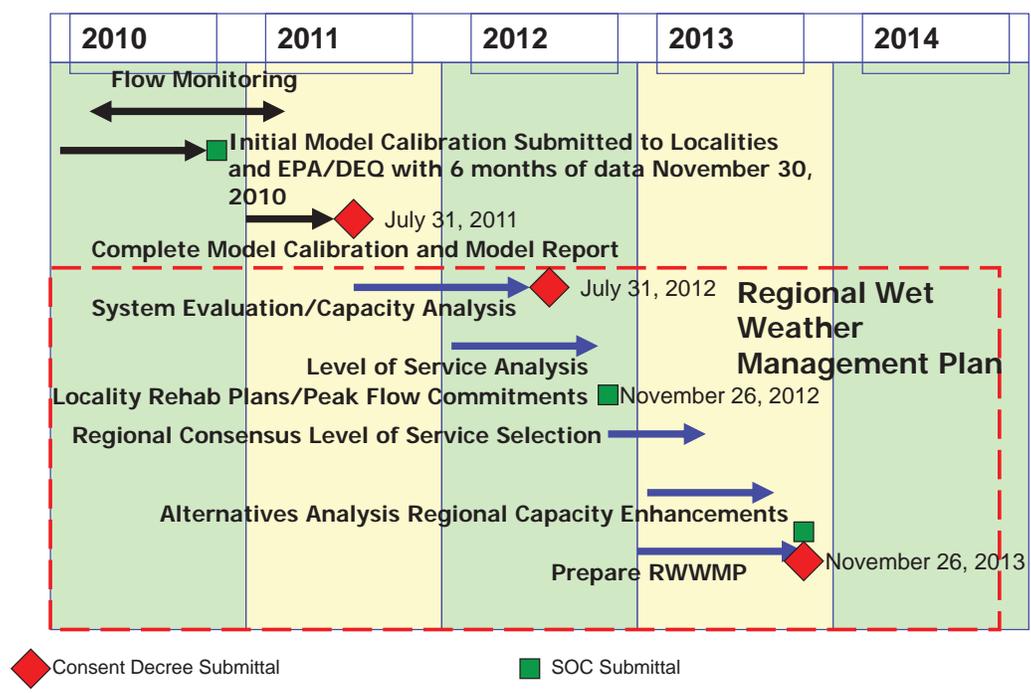
SOC Apportions RWWMP Costs



New Proposed Distribution of Costs



Consent Decree RWWMP Development Schedule



Common Ground

- Concurrent Rehab Plan development and preparation of the RWWMP solutions with PFCs NLT November 2012
- Consideration of affordability to inform the schedule for Rehab Plan implementation
- Hydrologic loading of flows is technically accurate and appropriate for Capacity Assessment and RWWMP solutions

Unresolved Issues

- Each Locality is concerned about the impact to their own ratepayers
- Affordability as a limit on the scope of rehab
- Length of Rehab Plan schedule for Localities (DEQ imposes limit)
- Approach to degradation
- Future design standards

Consent Decree Compliance Issue

- Uncertainty in flow loading to RHM puts HRSD's July 31, 2012 Preliminary Capacity Assessment Report deadline in jeopardy
- Uncertainty in what DEQ considers an acceptable plan confuses Localities' PFC and RWWMP schedule
- Unresolved issues create uncertainty for Localities in preparation of their Rehab Plans and their PFC and RWWMP schedule



Presentation to HRPDC
CAOs
March 15, 2012

State and Federal Enforcement Actions

- Basic premise
 - Localities agree to work to get inflow and infiltration out of their system
 - HRSD agrees to increase regional capacity as required to convey and treat those flows
- Overarching themes
 - Regional cost effectiveness
 - Balance locality I/I removal cost effectiveness with regional convey and treat cost effectiveness – do what is best for regional ratepayer
 - Regional equity among localities
 - Level of effort – not level of investment
 - Regional cooperation

Special Order by Consent Requirements

- Requires HRSD and localities to
 - Gather data on sewer systems
 - Measure flow
 - Perform condition assessments
 - Conduct SSES (Sanitary Sewer Evaluation Study)
 - Conduct hydraulic performance assessment
 - Develop rehabilitation plans
 - Develop Regional Wet Weather Management Plan (RWWMP)

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Purpose of Rehabilitation Plans

- SSES basins are to be studied and a plan to rehabilitate submitted to DEQ by Nov 2012
 - Rehabilitation plans are intended to reduce peak flows as far as cost effectively and feasibly possible
 - In basins where it is not cost effective to rehabilitate to get flows below the peak flow threshold, balance of flow must be handled in the RWWMP (most cost effective regional solution)
 - Additional rehabilitation
 - Storage
 - Convey and treat
- Result of rehabilitation plan is a peak flow commitment made by all localities for each SSES basin for use in developing the RWWMP

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Rehabilitation Planning

- Regional Technical Standards (RTS) lack specific details on exactly how much rehabilitation is required
 - Rehabilitation costs and effectiveness vary significantly
 - Existing conditions vary widely
 - Hydrology of basins influences results
 - Topography
- RTS was left open ended specifically to allow for the most cost effective and feasible solution to be developed for each basin in each locality

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The logo for HRSD, consisting of the letters 'H', 'R', 'S', and 'D' in a bold, blue, sans-serif font.

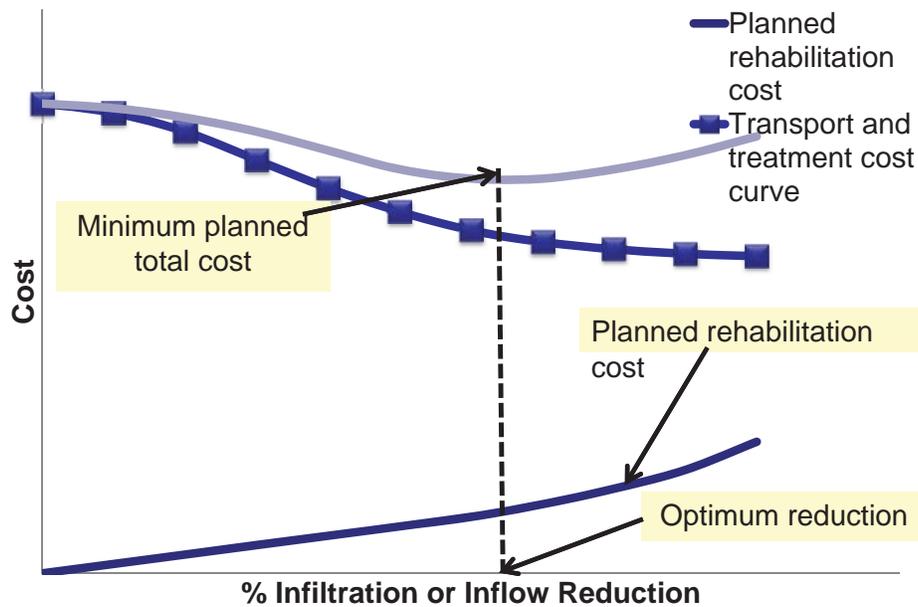
Varying Perspectives

- HRSD is pushing hard for as much I/I reduction as cost effectively and feasibly possible
- Localities are pushing hard for reasonable levels of investment – focused on affordability and regional equity
- DEQ is taking a reasonable position that localities should not commit to anything they cannot afford

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The logo for HRSD, consisting of the letters 'H', 'R', 'S', and 'D' in a bold, blue, sans-serif font.

Cost Curves



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HRSD

Complicating Factors

- Major issues impacted by existing political subdivision structure
 - Cost sharing approach of RWWMP
 - Most cost effective solution could be to spend regional ratepayer dollars rehabilitating locality collection system(s)
 - Larger infrastructure solution may only be necessary in some sections of service area
 - Firm flow commitments with flow agreements
 - Agreement on how to size new growth basins
 - Agreement on degradation of existing basins
 - Perpetual maintenance of flow commitments

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HRSD

Inability to Reach Consensus – Delaying Process

- Capacity Team (technical advisory committee) struggling to reach agreement on a proposal
 - Locality rehabilitation makes best effort to remove cost effective and feasible I/I and commits to that peak flow
 - Balance of flow reduction needs passed on to RWWMP to be handled through most cost effective solution
 - Additional rehabilitation
 - Convey and treat
 - Storage

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The logo for HRSD (Harrisburg Regional Sewer District) is displayed in a stylized, bold, blue font.

Current Process Appears to Lack Structure to

- Achieve most cost effective solution to regional ratepayer
- Minimize construction of oversized regional infrastructure
- Not force HRSD into role of regulator

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The logo for HRSD (Harrisburg Regional Sewer District) is displayed in a stylized, bold, blue font.

Without Structure from Regulators

- How can 13 localities come to consensus on determining
 - Regional equity
 - Additional capacity to include for growth
 - Effort required to maintain flows within peak flow commitment
 - How will peak flow commitment be enforced and what is consequence of not meeting commitment
- Systems are directly connected unlike water systems – impact of these issues goes beyond jurisdictional borders

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Regional Equity

- Regional equity major issue
 - Localities need to be able to address this issue with governing bodies: Is level of effort and investment consistent with that of other local governments within region?
 - If not, why not?
- RTS too broad to define
- DEQ unwilling to commit to define level of effort beyond affordability at this time

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Regional Equity or Regional Cost Effectiveness?

- Unlikely that a solution that meets need for regional equity will be most cost effective for regional ratepayer
- Solution developed without jurisdictional boundaries would focus regional resources on portions of system where return on investment is greatest
 - Work would be focused where most cost effective flow reductions are achievable while avoiding high marginal cost basins

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Estimating Future Flows

- Concept of flow commitments and enforceable agreements is driving conservative estimates of future needs
 - Localities want to maximize flow to regional system to preserve most flexibility with growth, especially if they are not paying directly
 - System growth and degradation factors could result in oversized regional infrastructure
 - Excessively large infrastructure creates operational and maintenance problems with pressure systems as well as increasing capital costs

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Enforcement of Flow Agreements

- Role of HRSD fundamentally changes with flow agreements
 - Potential source of friction between local governments and HRSD
 - Need to determine specific fault in all future SSO situations and assign responsibility
 - More regulatory as opposed to cooperative
 - Wastes resources that could be doing value added work for the regional ratepayer

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An Alternative for Consideration – Regionalization

- SSO issue can be dealt with as single entity
 - Apply resources where most cost effective
- No flow agreements needed
 - HRSD would commit to handling all flow from all lands developed per localities' approved Comprehensive Plans
 - Details on development issues, timing, speculation, etc would need to be worked out
- Operational savings could be achieved
 - Economies of scale
 - Shared resources

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An Alternative for Consideration – Regionalization

- Single regional sewer rate
 - Consistent for businesses with operations in multiple jurisdictions
- Consistent policies for all of Hampton Roads (connection policies, FOG, etc.)
- Single entity for regulators to deal with
 - Liability for SSOs consolidated with a single entity
- Shared service concept has broad public appeal

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Challenges of Regionalization

- Transfer of assets and liabilities
 - Debt assumption
 - Payment for assets
- Transfer of personnel, equipment, etc.
- Rate transition period
 - Varying local rates need time to transition to regional rate
- Economic development – support of special projects, etc.
- Level of service
 - Response to service requests
- General fund transfer of revenues

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Possible Path Forward

- Obtain local government CAO commitment to explore consolidation
 - Require non-binding resolution from governing body to explore/study (Needed for EPA/DEQ)
- Request that EPA and DEQ stay SSO work until consolidation study is complete but continue:
 - Condition assessment (including find and fix)
 - MOM
 - LOPs
 - Interim system improvements

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Possible Path Forward Cont'd

- Obtain regional consensus to use HRPDC to select and manage contract to study regionalization (HRSD funds study and administration)
- Appoint steering committee to guide study process
 - Locality representatives
 - HRSD
 - Other stakeholders
- Consultant gathers data; estimates costs and benefits; values assets, etc.; makes recommendation to regional CAOs and HRSD Commission

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Schedule

- Time is of the essence...once rehab work is approved at local jurisdiction level and RWWMP is developed with those associated flows, a significant benefit of consolidation will be lost
- Based on SOC, would need to approach regulators before July 2012 with proposal to stay orders to allow consolidation study
- Leaves only 90 days to obtain resolutions from 13 localities in SOC

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Questions?

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