

Briefing

MEMORANDUM

January 8, 2015

TO: Transportation, Infrastructure, Energy & Environment Committee

FROM:  Keith Levchenko, Senior Legislative Analyst

SUBJECT: **Briefing: Financing Water and Sewer Extensions**

Attachments to this memorandum include:

- PowerPoint Slide Presentation prepared by Department of Environmental Protection Staff (©1-16)
- Washington Suburban Sanitary Commission (WSSC) Chair Transmittal Letter and Subgroup Report¹ “Water and Sewer Extension Needs for Existing Neighborhoods” Excerpts (©17-27)

The following officials and staff are expected to attend this meeting:

- Dave Lake, Manager, Water and Wastewater Management, Department of Environmental Protection (DEP)
- Alan Soukup, Senior Planner, Water and Wastewater Management, (DEP)

NOTE: Council Staff has also invited Montgomery County's WSSC Commissioners as well as WSSC staff.

Background

The issue of the often cost-prohibitive nature of extending public water and sewer to areas with well issues and/or failing septic systems has come before the Council in several contexts in recent years.

There are a number of examples (in areas such as Clarksburg, Damascus, Germantown, Potomac, and elsewhere) where properties receive category changes (or would be granted category changes if requested) to allow for the extension of public sewer to address failing septic systems. However, these extensions ultimately do not move forward because applicants (who, under current policies, are responsible for paying the full extension costs minus any potential WSSC revenue from new front foot benefit charges) cannot afford the costs.

In other cases, property owners with functioning on-site systems but who wish to connect to public water and/or sewer in areas where public water and/or sewer are consistent with the relevant Master Plan recommendations and Water and Sewer Plan policies also find the costs to extend service are prohibitive.

¹ The full report is available for download at:
<http://www.montgomerycountymd.gov/council/Resources/Files/REPORTS/WSExtension-Needs.pdf>

This problem is especially acute with regard to aging septic systems. All septic systems will ultimately fail over time. If a property does not have sufficient acreage or suitable soil for a replacement well and/or septic field based on newer and stricter permit requirements, then public water and/or sewer may be the only viable long-term option. However, these extensions have gotten increasingly costly in recent years and, in many cases, the applicant may not be able to afford the cost of the water or sewer main extension (see ©8-10 for some cost examples). On relatively small and/or constrained properties, as septic systems approved under more lenient regulations (pre-1995) age out, the difficulty of installing replacement systems is likely to become more widespread.

A staff group with representatives from WSSC, Montgomery County, and Prince George's County studied this issue a number of years ago and presented recommendations to WSSC leadership that would have revised how water and sewer main extensions are financed in these cases.

More recently, at the request of Councilmember Floreen, a Bi-County Infrastructure Working Group chaired by WSSC took up the extension cost issue and had a subgroup look at some strategies for making water and sewer extensions more affordable. The subgroup released a report and presented its findings and recommendations to the WSSC Commissioners this past summer. This report was transmitted to both Montgomery and Prince George's Counties in late August. A portion of the report is attached on ©19-27.

Briefing

DEP staff have prepared a slide presentation (see ©1-16) that provides an excellent summary of the issue, including: the current extension cost process, the problems with the current process, and some potential solutions that warrant further study.

One potential change is the concept of creating subdistricts in which extension costs would be shared among all beneficiaries within the subdistrict. In Montgomery County, this kind of approach has been utilized to finance other shared community benefits such as: sidewalks, noise barriers, and even leaf vacuuming. This approach would have the effect of better allocating the costs of extensions with the beneficiaries of the extensions and thus result in lower costs per property owner.

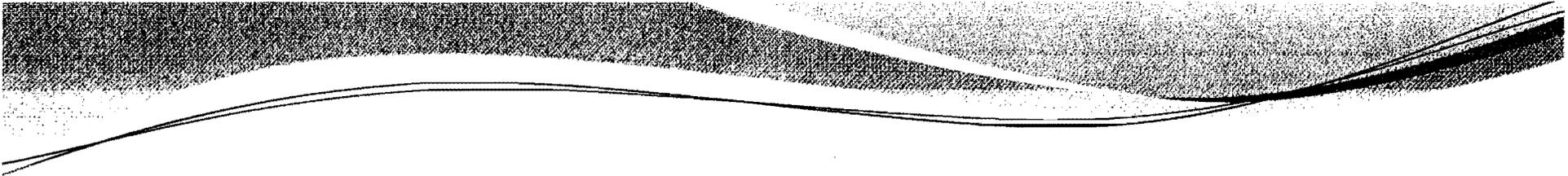
However, even under a subdistrict concept, some level of taxpayer or ratepayer subsidy or special financing may still be needed, given the high cost of water and sewer extensions.

At this stage, Council and DEP staff agree that further Montgomery County staff review is needed to flesh out potential policy recommendations. Once developed, these recommendations can be brought back to the Council for whatever action(s) may be needed for implementation. These actions may include Water and Sewer Plan policy changes, changes in County law, and also possibly changes in State law (especially if changes in WSSC practices are sought), and may also involve joint action by Montgomery and Prince George's Counties.

Assuming the T&E Committee is supportive of the development of concrete proposals to change the extension cost process, Council and DEP staff will begin this work.

Attachments

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Water and Sewer Extension Costs

Concepts from the Bi-County Infrastructure
Funding Working Group's Subgroup on
Unserved and Underserved Areas

Briefing to T&E Committee January 12, 2015
DEP- Water and Wastewater Policy Group



Background

- WSSC asked by T&E Committee in 2013 to address water and sewer extension cost issues
- WSSC decided to create a subgroup of its existing Bi-County Infrastructure Funding Working Group to address extension costs
- During 2013 and 2014 the Subgroup met approximately 8 times and presented its report to the WSSC Commissioners
- WSSC Commissioners accepted the report and sent it to the Executive and Council of each County



Background - Continued

- The Subgroup had five members
 - WSSC: Acting CFO Chris Cullinan
 - Montgomery County: Dave Lake and Alan Soukup
 - Prince George's County: Shirley Branch and Manfred Reichwein
- After WSSC transmitted the Report to the Counties it disbanded both the Subgroup and the Bi-County Infrastructure Funding Working Group
- WSSC has left the next step with the Counties



Report Outline

- Document current conditions
- Evaluate pros/cons of existing system
- Develop specific examples – model communities
- Identify financing schemes and possible alternative
- Evaluation of financing schemes and alternatives
- Suggest an “improved” system – Sub-district concept

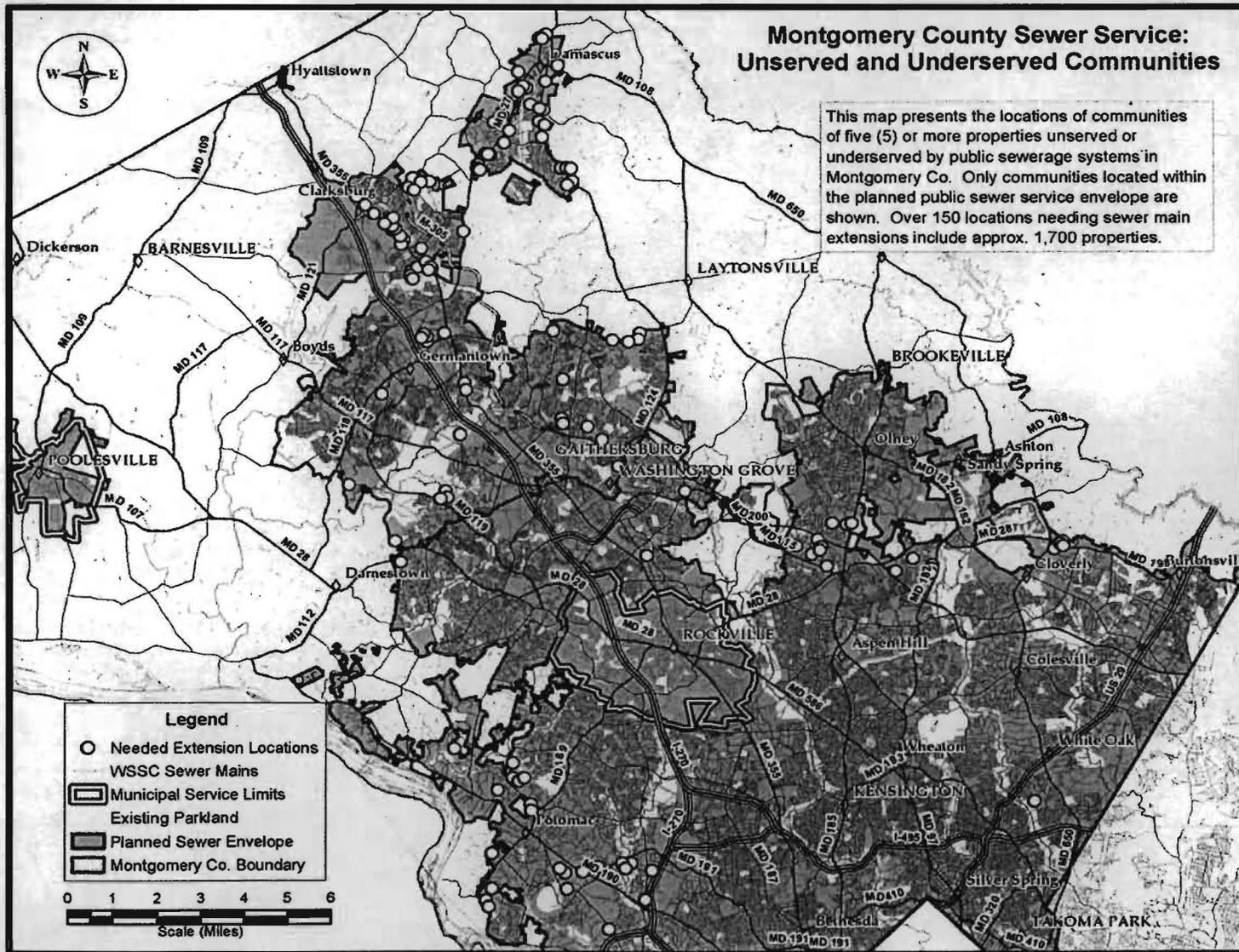


Magnitude of Sewer Service Extension Issues in Montgomery County

DEP inventoried communities planned for public sewer service, but without existing sewer mains. The map on the following slide presents:

- Locations of communities of five (5) or more properties unserved or underserved by public sewerage systems in Montgomery Co. (each shown as a yellow dot).
- Only communities located within the planned public sewer service envelope are shown.
- Over 150 locations needing sewer main extensions include approx. 1,700 properties.

Magnitude of Sewer Service Extension Issues – Cont.





Subgroup Consensus

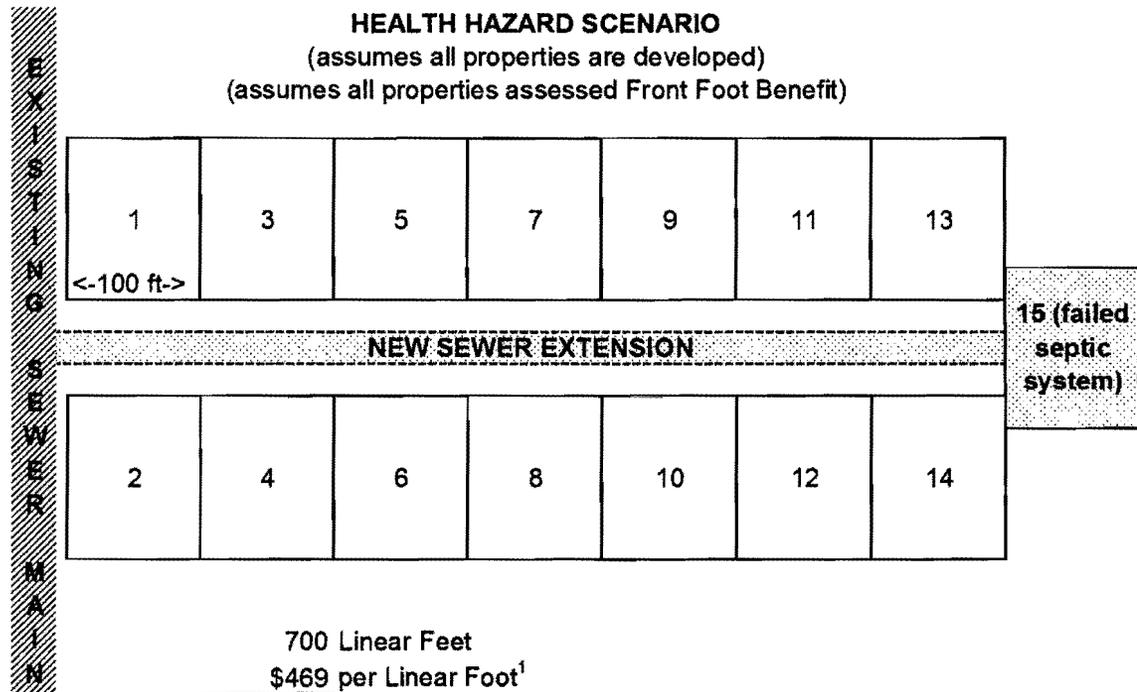
- Current Funding System does not work (front foot benefit charges, health hazard subsidy, and extension deficit payment process)
- Current system designed at least 50 years ago under assessment policies significantly changed in the 1990's.
- Current system was designed to pool large and small extensions and allocate costs over a large number of connections which made extensions affordable
- Current system has significant policy challenges including financial sufficiency, affordability, equity and participation concerns



Extension Cost Concerns

- WSSC sewer extension costs passed on to homeowners
 - \$664 per linear foot (extensions less than 500 feet)
 - \$469 per linear foot (extensions more than 500 feet)
- WSSC policy for Health Hazard Subsidy
 - Current \$15,000/property minus the Front Foot Assessment for 20 years (current WSSC policy significantly reduces, if not eliminates, subsidy contribution to applicant's cost)
 - \$15,000 max. subsidy has not been adjusted for inflation since its inception in the early 1980's
 - Formula and amount needs to be reviewed

Current System



Current System Extension Cost Example

EXTENSION COSTS TO APPLICANT

1,500 Assessable Front Footage (100 feet per unit x 15 units)

\$7.18 Sewer Front Foot Benefit (current rate)

\$10,770 Subtotal Annual, Projected Assessment Income from All Units Which Could be Served

\$177,098 Subtotal Projected Assessment Income Over 23 Years

\$15,000 Health Hazard Subsidy per Unit

15 Units Which Could be Served

\$225,000 Total Health Hazard Subsidy

-\$177,098 Less Projected Assessment Income Over 23 Years from All Units Which Could be Served

\$47,902 Subtotal Health Hazard Subsidy

\$225,000 TOTAL OFFSET

\$103,300 APPLICANT'S DEFICIT PAYMENT

\$6,300 Estimated Annual Payment

23 Years

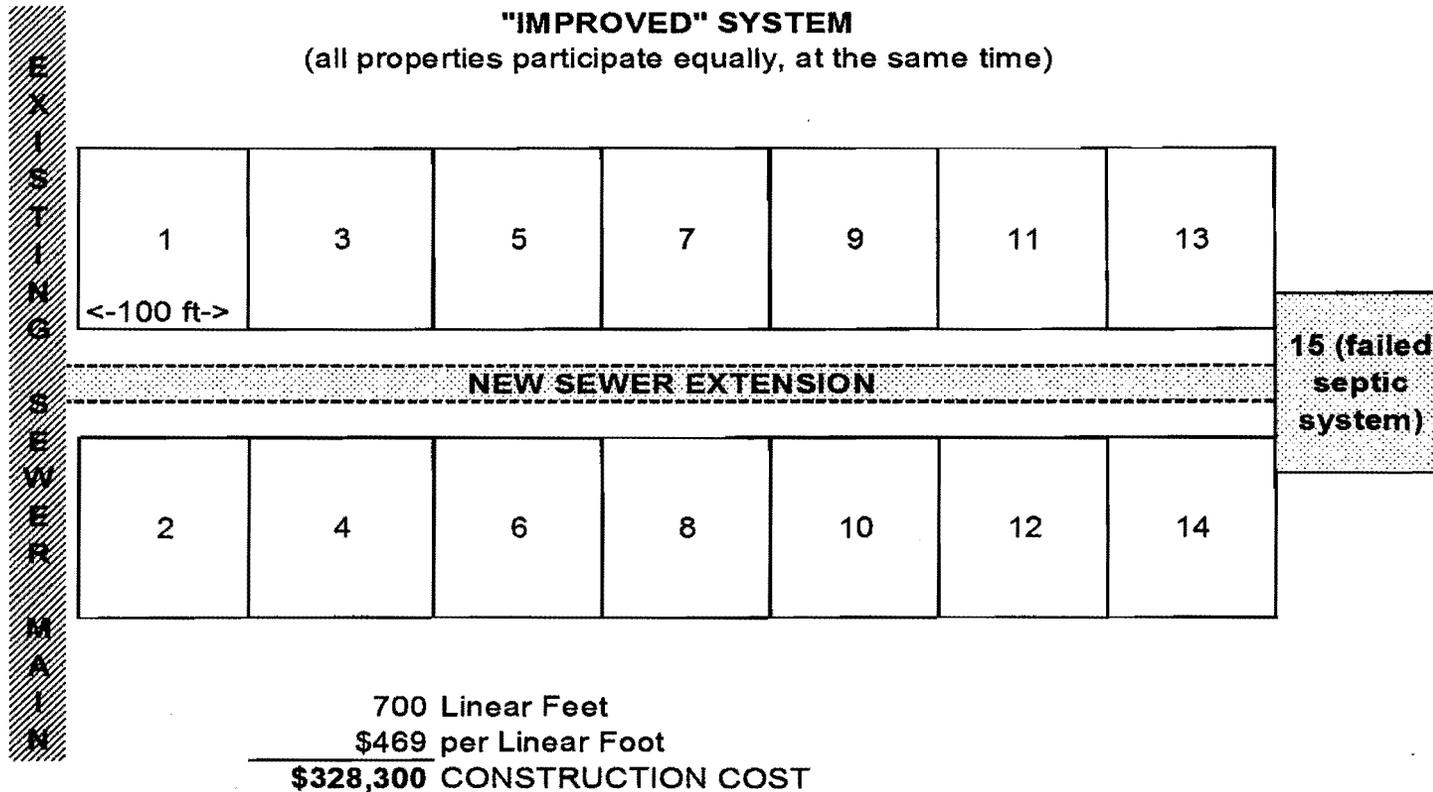
\$144,900 SUBTOTAL EXTENSION PAYMENT



An alternative to the current system

- Creation of Sub-districts in the County's Water and Sewer Plans on an as needed basis
- A Sub-district would be recommended to the Council in a Water and Sewer Plan amendment
- Area would be defined as a area in need of sewer service that could be served by a defined project
- All properties benefiting from the extension would contribute a defined fair share
- Goal: Equity and affordability for needed extensions

Sub-district Extension Example



Sub-district Extension Cost Example

EXTENSION COSTS TO APPLICANT

15 Properties

\$21,887 COST PER PROPERTY

-\$15,000 Less Health Hazard Subsidy

\$6,887 NET EXTENSION COST PER PROPERTY

ADDITIONAL COSTS TO APPLICANT

\$2,850 System Development Charge (3-4 toilets)

\$3,500 Connection Fee (sewer/septic hookup)

\$75 Inspections

\$95 Reprocessing Fee

\$2,500 Abandonment of Septic System

\$10,000 On-site Plumbing

\$19,020 SUBTOTAL ADDITIONAL COSTS

\$25,907 TOTAL COST TO APPLICANT



Creation of Sub-districts

- Standards/criteria for sub-district areas
 - Density of development
 - Condition and age of septic systems
 - Repair/replacement options for septic systems
 - Distance from existing sewer system
- Survey process
 - Number of properties
 - Properties scored /ranked using standard criteria
 - Community residents' support - meetings
- Water and Sewer Plan Amendment



Other Options to Promote Affordability

- Public Subsidies
 - WSSC ratepayers
 - Development fee dedicated to extensions
 - County taxpayers
- A solution is likely a combination of updated WSSC policies, County Water and Sewer policies, and public subsidies



Next Steps

- T&E/Council concurrence that a new cost extension process is desired and policy option direction for further consideration
- Montgomery County staff coordinates concepts with Prince George's County staff reach concept agreements
- Bring draft concepts back to T&E for concurrence as does Prince George's County with their THE committee
- Develop an implementation plan
 - WSSC policy changes
 - County Water and Sewer Plan policy changes (both counties)

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Washington Suburban Sanitary Commission

14501 Sweitzer Lane • Laurel, Maryland 20707-5901

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August 27, 2014

The Honorable Rushern L. Baker, III
Prince George's County Executive
County Administration Building
14741 Governor Oden Bowie Drive
Upper Marlboro, MD 20772

✓ The Honorable ^{elke} Isiah Leggett
Montgomery County Executive
Executive Office Building
101 Monroe Street, 2nd Floor
Rockville, MD 20850

RECEIVED
MONTGOMERY COUNTY
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Dear County Executives Baker and Leggett:

We are hereby transmitting the findings and recommendations of the Bi-County Infrastructure Funding Working Group's Subgroup on Unserved and Underserved Areas for your consideration. WSSC's Commissioners unanimously accepted the findings of the Subgroup on March 19, 2014 and authorized the transmittal of the attached report and findings to the legislative and executive branches of the two counties for consideration on July 16, 2014.

Unserved and underserved areas are those properties served by wells and/or septic systems (i.e. not connected to WSSC's water and sewer systems). As these wells and/or septic systems fail, homeowners face the very expensive prospect of connecting their property to WSSC's water and sewer systems. The Bi-County Infrastructure Funding Working Group established a subgroup comprised of staff members and a Commissioner from both counties and WSSC staff to study this issue and provide alternatives to the current extension process.

The current system is not a viable, long-term solution for addressing the issue of unserved and underserved areas. The Subgroup identified several financial and policy challenges with the current system for extensions. Principal among these challenges is the affordability of extensions for homeowners. The Subgroup's findings include a recommended process for moving forward toward the creation of an improved system of sub districts.

The Honorable Rushern L. Baker
The Honorable Isiah Leggett
August 27, 2014
Page 2

Sub districts can equitably allocate the large costs of extending public sewer extensions over a large number of properties to be served. Since extensions often serve more than one property, there is a significant question of equity. The sub district mechanism can mitigate these characteristics of the current system. The sub district mechanism also ensures that those who directly benefit from connecting to the public sewer system pay for the extension costs and are not be subsidized by rate payers.

Unified leadership from both the counties and WSSC is required to create and implement an improved system including the commitment of resources to educate, plan, and laying the foundation for the improved process.

Sincerely,



Gene W. Counihan, Chair
Bi-County Infrastructure Funding Working Group

Attachment

cc: The Honorable Mel Franklin and Members of the Prince George's County Council
The Honorable Craig Rice and Members of the Montgomery County Council

Water and Sewer Extension Needs for Existing Neighborhoods

Prepared by the Subgroup on Unserved and Underserved Areas for the Bi-County Infrastructure Funding Working Group



July 2014

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EXECUTIVE SUMMARY

Statement of Problem

Located within the defined public water and sewer envelopes in Prince George's and Montgomery Counties are numerous properties served by wells and/or septic systems (i.e. not connected to WSSC water and sewer systems). These unserved and underserved areas within the counties' public service envelopes may be within close proximity to existing water and sewer mains or were approved for construction of mains and extension of water and sewer lines. However, the extension of service to these properties—even over relatively short distances—is too expensive to allow them to connect. These properties are typically older homes that were constructed prior to development of modern design criteria and regulations. Consequently, individual on-site systems were constructed on lots:

- That may not meet modern standards for septic system placement
- That lack areas approved for replacement wells or septic systems
- That may not have approvable repair or replacement areas for on-site systems

Because the operating lives of septic systems are typically estimated to be 30 ± years, the issue of unserved and underserved areas has been growing and is expected to continue to grow as septic systems age and fail.

The cost of extending new water and sewer systems to serve these properties, whether desired by the homeowner or required due to a failing well or septic system, is too expensive to be initiated. Twenty years ago, WSSC constructed and financed community water and sewer lines and assessed a front foot benefit charge to homeowners. This system took advantage of economies of scale by spreading large infrastructure costs over a large number of properties resulting in an average front foot benefit assessment that was affordable. In the late 1990's, WSSC stopped constructing water and sewer lines for new subdivisions, instead relying on developers of those subdivisions to construct and finance these mains. This shift eliminated the benefits of economies of scale to the detriment of individual homeowners. Consequently, it has become next to impossible for the homeowners to upgrade these older houses to community water and/or sewer service, even when necessary due to failed or failing on-site systems.

This problem also works against fundamental goals in each County's Comprehensive Water Supply and Sewerage Systems Plan:

- That these plans establish public service envelopes based on adopted service policies and county-wide land use planning recommendations.
- Further, that water and sewer service policies, and infrastructure extension and financing mechanisms, act to promote the use of public services within these envelopes both for new development and for existing development still using on-site systems.

Note: This report focuses primarily on sewer extensions as these are more costly and more difficult to attain sewer suitability. The findings, processes, and alternatives discussed in this report are equally applicable to both sewer and water extensions.

Bi-County Infrastructure Funding Working Group

WSSC established the Bi-County Infrastructure Working Group ("The Working Group") in 2010 to identify options for lowering the trajectory of rate increases. These options included obtaining access to alternative and/or less costly sources of revenue or methods of funding for operational and capital requirements in the context of the growing need to rehabilitate, upgrade and replace water and wastewater infrastructure and related facilities. The Working Group is comprised of representatives from the executive and legislative branches of Montgomery and Prince George's Counties, one WSSC Commissioner from each county, and WSSC staff. One of the policy issues identified for study by the Working Group is the extension of public water and/or sewer service to unserved and underserved areas of Montgomery and Prince George's Counties.

Subgroup on Unserved and Underserved Areas

A Subgroup of the Working Group was created to further study this issue and to develop possible alternatives to the existing funding mechanism. The Subgroup included staff members from the two counties and WSSC:

- Shirley Branch, Prince George's County, Department of Environmental Resources
- Chris Cullinan, WSSC, Finance Office
- Dave Lake, Montgomery County, Department of Environmental Protection
- Manfred Reichwein, Prince George's County, Health Department
- Alan Soukup, Montgomery County, Department of Environmental Protection
- Tom Traber, WSSC, Finance Office (retired 2013)

The scope of the Subgroup's efforts included:

- Documenting the current unserved and underserved conditions in each County
- Evaluating the pros/cons of the current system using "sample communities" from each County
- Evaluation of financing criteria and alternatives
- Policy challenges/deficiencies of the current system
- Identifying a roadmap to an "improved" system of extending water and sewer service to unserved and underserved areas
- Develop financing options implement an "improved" system

The Subgroup met seven times during 2013 and made three presentations to the Working Group and two presentations to WSSC Commissioners. These presentations functioned as educational presentations and progress reports. This report is comprised of the research and information presented to the Working Group and Commissioners.

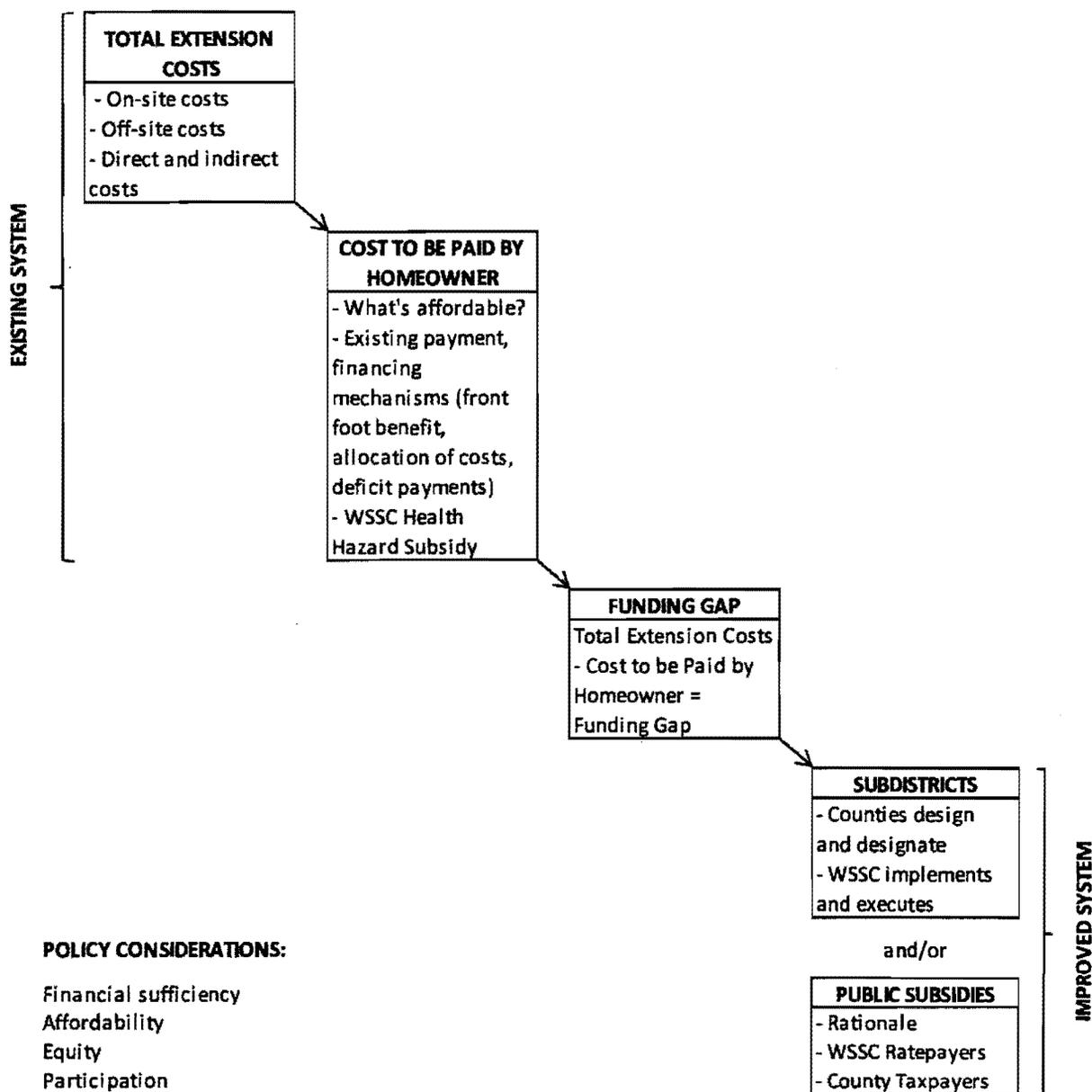
Findings of the Subgroup Regarding the Current System of Extensions

The current system of financing extensions is flawed. This is evident in the fact that since 2005, only sixteen extensions have been completed. The current front foot benefit system was designed to pool large and small extensions and allocates costs over a large number of connections which made extensions affordable. The current system does not work for small scale extensions, including health hazard situations. The current system has significant financial and policy challenges including affordability for applicants, financial sufficiency, equity and participation. Maintaining the status quo is not a sustainable, viable solution for systematically addressing the issue of unserved and underserved areas. The current system is not economical for failed systems or communities requesting service.

Framework for Moving Toward an “Improved System”

The Subgroup identified a framework for moving forward from the current system to an improved system. The framework involves several decision points and requires the coordinated efforts of Montgomery County, Prince George’s County, and WSSC. The following figure illustrates the framework for moving forward including several decision points to be addressed.

Figure 1: Decision-Making Framework for Moving Toward an "Improved System"



The Improved System: Sub Districts

The Subgroup suggested sub districts as a possible improved system for funding water and sewer extensions. Sub districts would spread large infrastructure costs over a large number of properties and would remedy a number of the challenges and issues under the current system. Both the counties and WSSC have experience using sub districts to finance capital program infrastructure projects, but the concept has never been used for water distribution or sewer collection systems. The fundamental goal is to equitably allocate the large costs of extending public sewer extensions over a large number of properties to be served. The current WSSC built extensions results in large costs which are not financially viable for individual applicants who initiate extension projects. In cases where an extension is able to serve more than one property, abutting property owners may opt out of connecting to the new main. This places more of the financial burden on the applicant, which raises significant questions of equity. The sub district mechanism, along with modifications to WSSC front foot benefit assessment policies, has the potential to mitigate these characteristics of the current system. The sub district mechanism would also directly benefit those who connect to the sewer system by helping pay for the substantial extension costs.

Conclusions and Next Steps

Maintaining the status quo is not a viable, sustainable solution to what is expected to be an increasing number of failing water wells and/or septic systems. An improved system for addressing the extension of water and sewer service has been identified along with a process for moving toward the improved system. Both the counties and WSSC have roles to play in the improved system. This will require unified leadership from the counties and the Commission including the commitment of resources to educate, plan, and lay the foundation for the improved process.

By consensus, the Working Group accepted the Subgroup's findings and framework for moving toward an improved system. The Working Group transmitted its consensus to WSSC's Commissioners. WSSC's Commissioners unanimously accepted the findings of the Subgroup on March 19, 2014 and authorized the transmittal of such findings to the legislative and executive branches of the two counties. The counties will be asked to endorse this concept and discussion and move forward toward an improved system. This will necessitate spending time and resources to more fully develop the process forward. The worth of this effort will be evident by the commitment of time, talent, and financial resources. The unified leadership of the Commission and counties will be required to move toward an improved system.