T&E COMMITTEE #1
October 26, 2015

Worksession

MEMORANDUM

October 22, 2015

TO: Transportation, Infrastructure, Energy & Environment Committee

FROM: Keith Levchenko, Senior Legislative Analyst

SUBJECT: **Worksession:** Text Amendment to the Comprehensive Water Supply and Sewerage Systems Plan: Glen Hills Area

Meeting Participants Include:

- Casey Anderson, Chair, Montgomery County Planning Board
- Fred Boyd, Master Plan Supervisor, Area 3, Montgomery County Planning Department
- Lisa Feldt, Director, Department of Environmental Protection (DEP)
- Dave Lake, Manager, Water and Wastewater Policy Group, DEP
- Alan Soukup, Senior Planner, Water and Wastewater Policy Group, DEP
- Gene von Gunten, Manager, Well and Septic Section, Department of Permitting Services

Schedule

On March 30, 2015, the County Executive transmitted a memorandum summarizing the results of the Glen Hills Area Sanitary Study[1] as well as his recommendations for Glen Hills sewer service policies going forward (see ©32-39). This sanitary study was recommended in the 2002 Potomac Subregion Master Plan.

Based on the recommendations transmitted, Council Staff confirmed with the T&E Committee and PHED Committee chairs that the Council's review of this issue would occur via the Council's Water and Sewer Plan amendment review process. Council Staff asked Executive Staff to draft and forward a Water and Sewer Plan text amendment to the Council. This text amendment was transmitted to the Council on June 2, 2015 (see ©24-31) and introduced by the Council on July 21, 2015. A public hearing was held on September 17, 2015.

[1] The Glen Hills Sanitary Study (both Phase I and Phase II) is available for download on the DEP webpage at: https://www.montgomerycountymd.gov/DEP/water/glen-hills.html.

The T&E Committee has scheduled two meetings regarding the Glen Hills Text Amendment.

- At the first meeting (October 26), the T&E Committee will receive a briefing from County Executive Staff regarding the Glen Hills Sanitary Study and the County Executive's recommended text amendment. The Committee will also hear from Planning Board staff regarding the Planning Board's recommendations. The Committee can also discuss a proposed text amendment submitted by Chen & McCabe, L.L.P. on behalf of the Greater Glen Hills Citizens Coalition and the Potomac Highlands Citizens Association, and a proposed text amendment submitted by Miles & Stockbridge on behalf of some other property owners in the Glen Hills area. Within this memorandum, Council Staff has identified a number of issues for discussion related to these various options.

- At the second meeting (November 16), Council Staff will provide recommendations and the T&E Committee will discuss any follow-up issues and remaining questions with the intent of finalizing a Committee recommendation to take to the full Council for final action.

Potomac Subregion Master Plan (2002) (excerpt ©19-23)

Planning Department staff provide a good summary of the 2002 Master Plan's recommendation and rationale in their memorandum for the September 24 Planning Board meeting.

A key point is that under the prior Master Plan (1980), sewer extensions to large lot zones (such as one and two acre lots) in the Potomac Subregion were considered on a case-by-case basis (under a "logical, economical, and environmental" set of criteria). However, the 2002 Plan moved back in alignment with the County's Water and Sewer Plan general policies and the recommendation of most other master plans at the time to recommend that large lot zones generally be served by septic systems.[2] Pages 21 and 22 of the 2002 Plan (see ©19-20) note the concerns with serving large lot zones with sewer, including that sewer extensions can:

> *"damage the environment and water resources by facilitating development to the maximum zoning density. Extensions along stream valleys can also create habitat disturbance, threatening species survival, and can adversely affect the natural hydrologic system due to wetland fragmentation. Once sewer lines are in place, their structural integrity may deteriorate over time, resulting in sewage leaks and further disturbance to the ecosystem... Typically, low zoning densities (such as RE-1 and RE-2) are used to protect the natural environment by minimizing development impacts. Low and, in some cases medium, density areas (such as R-200) are dependent on septic suitability, often resulting in actual development yields well below the maximum allowed by zoning."*

The Plan goes on to note that:

> *"contrary to smart growth policies, (extending sewer to large lot properties in the Potomac Subregion area) has undermined the environmental emphasis of zoning areas for low-density development, especially where septic suitability is marginal."*

[2] According to Planning Department staff, there are 7,726 privately owned RE-1 zoned lots on 10,728 acres throughout the County. The vast majority of these are designated Category S-6 (on-site septic).

For the Glen Hills area, the 2002 Plan restricted sewer connections to properties with failed septic systems, with sewer main extensions to be "evaluated on a case by case basis for logical, economical, and environmentally sensitive extensions of service." Properties in the Glen Hills area were also restricted from connecting under the County's abutting mains policy (applicable in most of the rest of the County) out of concern that this policy would lead to inappropriate expansions of the sewer envelope in this area.

The 2002 Plan also called for a study of septic failures in Glen Hills and a review of the long-term sustainability of septic service and the preparation of a logical and systematic plan for providing community sewer service if needed. Over time, DEP staff attempted to begin such a study in-house but was unable to move forward with a study within existing resources. For FY12, the Council added $350,000 to the DEP General Fund budget for a consultant study.

Some of the Master Plan issues Council Staff would note for T&E discussion are provided below:

- **The Water and Sewer Plan and many master plans (including the 2002 Potomac Subregion Master Plan), clearly state that large lot zoned properties (such as RE-1) should be served by on-site septic systems (with limited exceptions provided for sewer approvals). Should this general policy continue to be applied in Glen Hills?**

- **The 2002 Potomac Subregion Master Plan and other master plans assume to limit development density based on septic suitability (which can lead to development yields below what is allowed by zoning). Should this approach continue to be applied in Glen Hills?**

- **If exceptions to the above policies are made for the Glen Hills study area, how best can these exceptions be implemented so as not to establish a precedent for other RE-1 zoned areas of the County?**

- **Executive and Planning Department staff concur that the Executive's Water and Sewer Plan text amendment is compatible with the 2002 Potomac Subregion Master Plan. However, as other more expansive sewer approval options are discussed, at what point is a Master Plan amendment needed?**

State Approval

All amendments to the County's Water and Sewer Plan are subject to approval by the Maryland Department of the Environment (MDE). Therefore, amendment approvals by the Council are considered preliminary until MDE action.

Another State-related consideration is that most of the Glen Hills study area is designated Tier III on the Montgomery County Growth Tier Map. This tier structure was created in State law as part of the "Sustainable Growth & Agricultural Preservation Act of 2012", which was intended to limit the spread of septic systems in certain large lot areas in order to reduce nitrogen loads in the Chesapeake Bay.

Tier III is identified as, "Large Lot Developments and 'Rural Villages' on septic."[3] Tier I is areas currently served by sewer. Tier II is future growth areas planned for sewer. Tier IV is preservation and conservation areas/no major subdivisions on septic.

While the intent of the tier structure seems unrelated to the issues associated with the Glen Hills study, according to Planning Department staff, modifying the tiers requires amendments to the County's General Plan (or applicable master plan in the case of Montgomery County) or amendments to the Subdivision Regulations.

Maryland Department of Planning staff have indicated (see ©47-50) that the Executive's text amendment is consistent with the 2002 Master Plan and also that since the Executive's proposed amendment "does not propose any sewer designation changes no growth tier map amendments are needed at this time."

Council Staff followed up with MDP staff and confirmed that extending sewer to address public health problems (as the Executive's text amendment would do) would also not require changes in the tier designation for the area. In general, the only approach that MDP staff indicated might raise this issue is if sewer is extended to facilitate subdivision. However, even in that case, MDP staff have suggested that the Water and Sewer Plan amendment would be decided first (ultimately by MDE as noted above) and that the tiers would then be adjusted accordingly if needed.

Glen Hills Sanitary Study and County Executive Recommendations

County Executive Staff will provide a PowerPoint presentation (see ©1-18) at the October 26 Committee meeting. This presentation will summarize the Glen Hills Sanitary Study[4] (both Phase 1 and Phase 2) as well as the County Executive's recommendations.

The Glen Hills study area consists of 542 properties (nine of which are located within the City of Rockville). All of the properties are zoned RE-1. The chart below summarizes how the properties are currently served by public water or wells and public sewer or septic.

[3] See http://www.mdp.state.md.us/ourwork/sb236implementation.shtml

[4] Executive staff have described this study as a "planning level" study looking at long-term septic and sewer feasibility, since the study did not involve a site-by-site analysis of the 542 properties in the study area. As such, the Executive recommendations described later assume an approach where future category change approvals are based on site-specific issues.

Properties in the Glen Hills Study Area

# with Well and Septic	183	33.8%
# with Public Water & Septic	187	34.5%
Total Properties on Septic	**370**	**68.3%**
# with Public Sewer & Public Water	35	6.5%
# with Public Sewer & Public Well	68	12.5%
Total Properties on Sewer*	**103**	**19.0%**
Undeveloped Properties	69	12.7%
Total Properties	**542**	**100.0%**

*NOTE: properties approved for sewer but not yet connected are included in the sewer totals.

Phase I of the Glen Hills Sanitary Study looked at existing conditions and identified eight parameters to consider with regard to the long-term sustainability of septic systems in the study area.

Parameters Assessing Potential Constraints for Deep Trench Septic Systems

System Age	52%	of systems permitted prior to 1975
Streams and Floodplains	21%	of the study area is potentially constrained (areas containing streams and floodplains)
Topography and Steep Slopes	7%	of the study area is potentially constrained (12 percent slope or greater)
Depth to Groundwater	9%	of the study area is potentially constrained (groundwater depth of 0 to 3 feet)
Depth to Bedrock	9%	of the study area is potentially constrained (depth to bedrock of less than 5 feet)
Percolation and Permeability Rate	13%	of the study area is potentially constrained (designated as moderately slow or slower)
Soils Classification	18%	of the study area is potentially constrained (designated as "severe" for trench development)
System Failures and Replacement	10%	of existing systems had multiple septic failures. Also includes unimproved properties which failed septic testing
Overlay Result	**36%**	of the study area acreage is potentially constrained

The study concluded that approximately 36 percent of the study area is potentially constrained by at least one of the above parameters. This does not mean that septic systems in this area will imminently fail but rather that there are long-term sustainability issues. The rest of the study area did not have these constraints, and deep trench septic systems are expected to generally work well in the long term.

From the above results, DEP identified eight review areas for future Phase II evaluation.

The Phase II study identified strategies and estimated costs for addressing these long-term issues in the review areas, including: standard on-site septic system replacements (i.e., deep stone-trench systems), use of alternative and innovative on-site systems (i.e., shallow stone-trench, sand mound, and drip disposal systems), and future sewer extensions.

The study identified 13 conceptual sewer extensions that would serve 197 improved properties and 26 unimproved properties. For the sewer extensions, alignments in public road rights-of-way were chosen as much as possible to minimize environmental impact.

County Executive Recommendations

The County Executive's recommendations include:

- Consistent with the 2002 Potomac Subregion Master Plan and general Water and Sewer Plan policies for RE-1 zoned areas (such as Glen Hills), assume that on-site septic systems will continue to be the preferred approach for sewage treatment and disposal in the Glen Hills Area.
- Continue to allow the extension of sewer to address documented public health problems resulting from septic system failures.
- Allow for the extension of public sewer in Glen Hills to address designated public health problem areas (similar to what is allowed in other areas of the County).
- Pursue with Prince George's County the development of a modified water and sewer main extension process that improves the affordability of main construction for individual property owners.
- Restore the use of the abutting mains policy in the Glen Hills area.
- Maintain the Piney Branch restricted sewer service access policy for those parts of Glen Hills that are within the Piney Branch subwatershed.

The County Executive's recommendations for Glen Hills would, for the most part, treat Glen Hills in a similar manner to how other large lot residential zones are treated elsewhere in the County. The recommendations would not in themselves change any sewer category designations. Instead, an incremental process involving individual properties and/or the creation of public health problem areas would proceed.

As currently allowed, properties with failing systems can work with the Department of Permitting Services to determine whether on-site solutions are feasible or if sewer is the best long-term solution. In addition, DEP and DPS could now consider creating public health problem areas[5] to address both existing and/or anticipated septic failures in an area that could be served by a logical/environmental extension of sewer service (see ©29 for Water and Sewer Plan language regarding public health problem areas). DEP staff will be available at the October 26 meeting to describe how the public health problem area process works.

As noted in the Phase 2 report, there are 21 improved properties that abut existing sewer mains and could (if the Executive's text amendment is approved) immediately apply for and receive administrative approval for a single connection. In the future, if new sewer extensions abut other improved or unimproved properties, then those properties would also be eligible for a single hook-up.

[5] A list of problem areas that have been created in other areas of the County is attached on ©64.

Council Staff suggests that the Committee discuss the following issues with Executive Staff regarding the Executive's text amendment:

- **Under the Executive's approach, how would public health problem areas be identified and the boundaries established? Can this process be made more predictable and certain for property owners?**
- **As noted earlier, DEP staff have categorized the Glen Hills Sanitary Study as a "planning level" study and not a site-specific sanitary study. However, even so, could the Council, based on the results of the study, choose to consider all of the Glen Hills study area or portions of the study area (for instance, the eight review areas) as problem areas now and approve a text amendment doing so?**
- **Are there ways to provide more flexibility to property owners with septic systems for whom future sewer extensions may be unlikely or too expensive, who would like to expand their homes? (Note: This issue is discussed later in the memorandum).**

Septic Issues

Gene von Gunten, Manager, Well and Septic Section, Department of Permitting Services (DPS) will be available at the October 26 meeting to provide information on various septic issues such as how DPS, determines a septic system has failed and what solutions are recommended. Mr. von Gunten can also speak to how septic limitations on a site affect if and how a property owner can expand their home.

Septic vs. Sewer: Which is better for the Environment?

During its review of category change requests, the Council often hears arguments from proponents or opponents of a particular category change request that either septic or sewer is the more environmentally sensitive approach.

The difficulty in making a general assessment is that the circumstances of a particular situation greatly affect the pros and cons of each.

The environmental impacts of sewer construction can vary greatly, depending on the required sewer alignment (in a stream valley versus in a road right-of-way, for instance).

While wastewater treatment plants in the area have been upgraded to essentially eliminate nitrogen discharges into waterways (while most existing septic systems do not have this nitrogen reducing technology), sewer lines can still break, resulting in far more sewage discharge into local streams than would occur from an individual septic system failure. However, sewer systems are professionally inspected and maintained, while septic system maintenance is dependent on individual property owners.

If the choice for a particular property is between no development on septic and denser development on sewer, then from a purely environmental standpoint, the additional density obtained on sewer is likely to be more environmentally deleterious, compared to an undisturbed site. However, if density on a site is to be similar under septic or sewer, on-site septic could be more damaging if, for instance, more on-site tree clearing is required to accommodate the septic system.

Council Staff asked DEP staff for its thoughts on this issue:

"There is no authoritative source found that addresses this topic due to the multitude of factors involving septic systems and sewers. It seems that available literature on this topic is either situational or somewhat biased. Prominent among the qualifications cited are references to a properly–maintained septic system or systems meeting current standards. Education is also cited as important to successful septic system use; something Montgomery Co. is not doing on a programmatic basis. Clearly, moderate and high density development must rely on public sewerage systems. Low-density residential, rural and agricultural development is generally expected to rely on septic systems. Septic use is often explained as important to maintaining low-density character, while some developers push for new public sewer service as a means to increase development density and change the character of rural areas.

"No unbiased source that I have found so far seems willing to state definitively which is better from an environment position: septic or public sewer. Both have pros and cons; both have applicability in differing situations. Some sources support septic system use due to the high cost of providing public sewer. Some sources support public sewer use for its convenience and less homeowner maintenance."

Documenting and Addressing Septic Failures

As noted earlier, large-lot zoned areas in the County are generally assumed to utilize septic systems and not be eligible for public sewer service except under limited conditions. One of those conditions allowing sewer approval is that a septic system is documented by the Department of Permitting Services (DPS) as having failed.

According to DPS staff, "septic failures include surface discharges; sewer back-ups; and contamination of the underground aquifer by improperly treated effluent. Of the three, the last is the most difficult to identify."

When a failure is documented, DPS goes on to say that:

"We work closely with MCDEP to determine sewer availability and we pursue on-site (septic) replacement only in those cases where the Council has not assigned a sewer service category of S-1. If the property is any other category; but the sewer system is located nearby; we direct the property owner to MCDEP and WSSC to investigate sewer service potential."

For those properties where sewer service is not available:

"...The current requirements for minimum septic reserve area and best available technology (BAT) treatment are intended to insure that those dwellings have adequate and effective on-site treatment and disposal for the long-term."

As the Council and the Planning Board heard at their respective public hearings, a number of Glen Hills residents have noted that even when a property owner's system is not failing, they may still be unable to get approval from the County to expand their homes because of septic limitations.

Council Staff asked Mr. von Gunten to describe the County and State septic requirements with regard to property owners seeking to expand their homes. Mr. von Gunten noted:

> *"The regulations that apply here are both State (COMAR) and County (Executive Regulation). Montgomery County regulations have allowed, since 1994, for modest additions to dwellings where the parcel or lot cannot be brought up to current standards. If the original septic system is documented in our files, and almost every Glen Hills property is, then the homeowner was allowed to increase the "living space" by up to 25% of the original configuration. The County regulation also allowed the addition of one bedroom over the capacity of the original system. The State changed this somewhat when it enacted the so-called BAT (best available treatment) legislation that took effect January 1, 2014. Subsequent to 1/1/2014, any increase in bedrooms; or any significant increase in living space, must be supported by the upgrade to BAT standards. This means the State regulation (COMAR 26.04.02) is now more stringent than the County Executive regulation (28-93am). Therefore, we are constrained to require the use of the BAT in every case where the number of bedrooms is being increased. Further, the State requires that the septic reserve area of the lot be evaluated when significant increases in living space are proposed. Nevertheless, we still consider expansions on a case by case basis; and every attempt is made to accommodate modest additions in living space (< 25%) that are not accompanied by an increase in bedroom count and do not seem to indicate a significant increase in sewage flow will result."*

Public Hearing and Written Correspondence

A public hearing on this text amendment was held on September 17, 2015. The Council heard from a number of Glen Hills residents who support going beyond the County Executive's recommendations and allowing sewer in the Glen Hills area to address current or potential future septic problems, to provide flexibility for property owners to do improvements to the homes (such as expanding homes and/or adding bedrooms) that are currently not possible with their septic systems, and to allow vacant properties to connect and build out within what is allowed under current zoning. Some actual proposals that go beyond the County Executive's recommendations are attached (see ©51-63) and are discussed in more detail later in this memorandum.

The Council also heard from the West Montgomery County Citizens Association (see ©70-73) and some individuals (see ©74-79) who support the County Executive's recommendations and do not support broader sewer approvals in Glen Hills.

Planning Board Recommendations

The Planning Board discussed the text amendment on September 24, 2015. In its memorandum (see ©42-46) to the Planning Board, Planning Department staff expressed support for the County Executive's recommendations, noting that the recommendations are:

> *"consistent with both the Potomac Subregion Master Plan's specific recommendations for evaluating sewer service in the community and the Master Plan's broader land use goals for the preservation of low-density residential resources in Potomac. It reinforces the Plan's environmental focus by using septic suitability as a "proxy" for managing densities and allowing environmental constraints to limit the environmental impact of residential development."*

The Planning Board heard from many of the same people the Council heard from at the public hearing, and the Planning Board had a spirited discussion about how to move forward.

Ultimately, the Planning Board (letter attached on ©40-41) supported the County Executive's recommendations, but with modifications to provide more clear and objective standards and faster and more certain paths for properties to connect to sewer "when circumstances warrant." While supporting the Executive's recommendation that septic service continue to be the preferred approach for serving properties in the Glen Hills area, the Planning Board suggests a more pro-active approach to replacing septic systems, noting that:

> *"if a property owner with a troubled system can demonstrate that their property would not be considered suitable for a new septic system if the property were being developed for the first time, then that homeowner should be considered eligible for sewer service on public health grounds."*

Council Staff has asked Planning Department staff to clarify at the T&E meeting how the Planning Board's approach regarding "troubled systems" would be different from the current approach byDEP and DPS regarding failing systems.

There appears to be agreement among Executive and Planning Department staffs that the Executive's proposed text amendment can be achieved without having to amend the 2002 Potomac Subregion Master Plan. However, it is not clear whether some of the other policy change suggestions (discussed later) could or should be done without revisiting the Master Plan. Council Staff will review the various policy options under consideration and provide guidance to the Committee on this issue at its November 16 meeting.

Other Policy Options for the Glen Hills Study Area

The Council has received two other suggested text amendments, both of which would go further than the Executive's proposed text amendment. Any questions or issues regarding these proposed amendments can be brought back for review at the November 16 T&E Committee meeting.

Chen & McCabe, L.L.P. Text Amendment (on behalf of the Potomac Highlands Citizens Association and the Greater Glen Hills Coalition, LLC (see ©X)

On October 19, the Council received a proposed text amendment from the attorney representing two groups of property owners in the Glen Hills study area. The main thrust of this text amendment is that the conclusions of the Glen Hills Sanitary Study and the testimony and submissions of area residents "demonstrate the existence of failed septic systems...The evidence establishes the need for future sewer service extensions..."

The proposed text amendment includes the language proposed by the County Executive (including the language noting that on-site septic systems are the primary wastewater method), but adds new language noting that S-3 (single hook-up only) would be approved for properties "which need service, whether for new construction or renovation, that on-site conventional deep trench septic system is not feasible or adequate." The amendment goes on to note that "Sewer service is not available for new lots or new lots created by the subdivision of parcels."

This amendment goes further than the County Executive's text amendment by making existing unimproved lots eligible for single hookups (even in cases where a main does not abut the property). This amendment would also provide for approvals for properties which may have functioning septic systems but which cannot expand. The amendment also specifies that feasibility and adequacy of on-site systems is limited to conventional deep trench septic systems (specifically excluding alternative or innovative systems).

Miles & Stockbridge Text Amendment[6] (on behalf of Kevin Smart and George Simmons) (see ©X)

This correspondence recommends that the Council move away from the land use policy noted earlier of limiting development density in the Glen Hills area based on septic suitability. Under the proposed amendment, property owners "of both existing, recorded, buildable lots and...un-subdivided and unbuildable properties for which original subdivision applications are approved by the Planning Board" would be eligible for public sewer.

This amendment focuses on allowing public sewer for unimproved properties but would presumably mean sewer approvals to improved properties (with or without septic failures) would also occur.

Next Steps

Council Staff will be working with Executive and Planning Department staff to better understand the policy options currently under consideration, identify whether there are other implementation approaches worth considering, consider the master plan implications of these various actions, and make recommendations. Any issues or questions raised at the October 26 meeting requiring follow-up will also be brought back for discussion at the November 16 meeting.

Attachments to this memorandum include:

- Presentation Slides: Glen Hills Sanitary Study and County Executive Text Amendment (©1-18)
- Potomac Subregion Master Plan (2002) Excerpt (©19-23)
- County Executive Recommended Text Amendment Transmittal dated June 2, 2015 (©24-39)
- Planning Board Letter to the Council dated October 5, 2015 (©40-41)
- Planning Department Staff Memorandum dated September 24, 2015 (©42-46)
- Maryland Department of Planning Letter dated September 24, 2015 (©47-50)
- Letter from Chen & McCabe, L.L.P. dated October 19, 2015 (©51-60)
- Letter from Miles and Stockbridge P.C. dated October 16, 2015 (©61-63)
- Samples of Health Problem Areas from the Water and Sewer Plan (©64)
- Glen Hills Area Septic System and Public Sewer Q&A Information Sheet (©65-69)
- West Montgomery Citizens Association Public Hearing Testimony (©70-73)
- Letter from multiple signatories dated October 14 (©74-79)

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[6] NOTE: The form of the correspondence received is not in the form of a text amendment and Council Staff would need to convert this to amendment text if the Committee were to choose to pursue this approach.

Glen Hills Area Sewer Policy Text Amendment

Montgomery County Department of Environmental Protection

Water and Wastewater Policy Group

For the T&E Committee

October 26, 2015

Under Consideration

Sewer Service Policies for the Glen Hills Study Area

Currently before the Council is a Water and Sewer Plan text amendment, recommending revised sewer service policies for the Glen Hills area near Rockville. The County Executive has provided these recommended service policies based on the results of the Glen Hills Area Sanitary Study.

Under Consideration

Sewer Service Policies for the Glen Hills Study Area

The County has conducted this study of septic and sewer service for the Glen Hills area, as recommended by the 2002 Potomac Subregion Master Plan.

The master plan's intention was to allow the County Council to use the study results in considering sustainable wastewater management policies for the study area. These policies would replace an interim policy recommended by the 2002 master plan.

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Issue History

Prior to the current 2002 Potomac Subregion Master Plan sewer extensions in the study area were allowed:

- On demand until the mid-1970s (prior to the County's water and sewer planning authority).
- On a case-by-case basis under sewer staging policy recommendations in the 1980 Potomac Subregion Master Plan. These recommendations allowed for the consideration of public sewer service for Sewer Stage IV areas zoned RE-1 and RE-2 on a case-by-case basis. The 1980 master plan's recommendation, resulting in sewer construction in Glen Hills, was an allowed and unique exception to general sewer service policies in the Water and Sewer Plan.

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Issue History

Environmental studies conducted in advance of the 2002 Potomac Subregion Master Plan raised concerns about the environmental effects of the 1980 master plan's RE-1 and RE-2 sewer service recommendations. It concluded that increased impervious area promoted by public sewer service had a detrimental effect on water quality.*

The 2002 master plan revised sewer service recommendations for RE-1 and RE-2 areas to support Water and Sewer Plan general service policies promoting the use of on-site septic systems rather than public sewer.

The 2002 master plan also recommended specific interim sewer service limitations for the study area pending the County's sanitary study.

**M-NCPPC 2004 study for PIF issues RE-1 Zone research:*
- *Average imperviousness = 11%*
- *Average acres per dwelling = 1.7*

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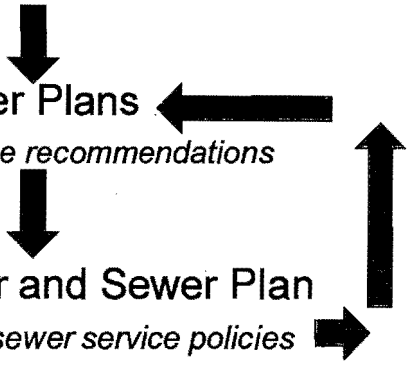
Planning Considerations

- General Plan
- Master Plans
  Land use recommendations
- Water and Sewer Plan
  Water/sewer service policies



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Planning Considerations

Comprehensive Water and Sewer Plan establishes county-wide water/sewer service policies and designates corresponding service area categories

In the Water and Sewer Plan:

- Public sewer is generally assumed to serve moderate to high development densities of two or more units per acre (R-60, R-90, R-200 etc...) and under certain cluster options (RE-2C, RNC, etc.).
- Areas zoned for lower-density residential development (RE-1, RE-2 and other large lot and rural zones) are intended to be served by on-site systems (i.e. septic systems).

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Glen Hills Planning Considerations

- Study area is zoned RE-1
- Minimum lot size = 40,000 sq. ft. or 0.92 ac. (Generally, minimum lot area needed for well and septic)
- Water & Sewer Plan service policies for one-acre, rural estate zoning (RE-1):
  - ***Planned to use water wells; public water can also be considered case-by-case. (Entire Glen Hills study area is approved for public water service: W-1 or W-3.)***
  - ***Planned to use septic systems. (Reflects land use policy: lot yield is determined by septic suitability)***
- Some Water & Sewer Plan policies (abutting mains) are not supported by the 2002 master plan

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Glen Hills Study Area

542 Properties

473 properties improved

69 properties not improved

Northeastern edge within the Rockville water/sewer service area

Bracketed between Watts Branch and Piney Branch

DEP added Lakewood Estates, Lakewood Glen, & Hollinridge to the original Glen Hills study area. (Similar zoning, age, lot sizes, etc.)

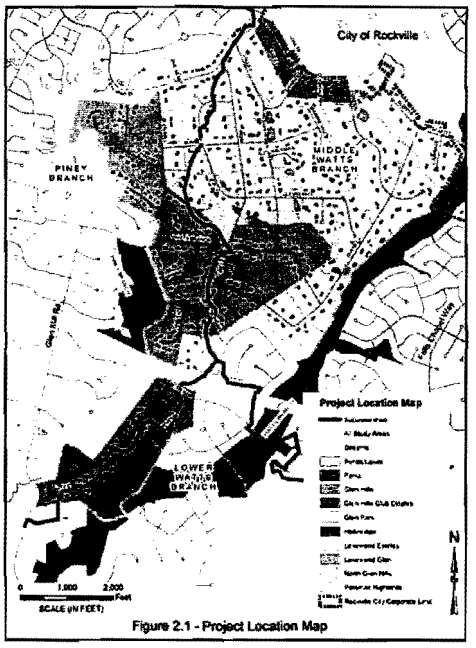

Figure 2.1 - Project Location Map

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Septic Systems and Public Sewer

Septic systems:

- Owned and operated by the property owner.
- All infrastructure is on site.
- Property owner responsible for repairs and replacement.
- Serve 370 of 542 properties in the study area (68 %).

Public sewer systems:

- Owned and operated by public utility (WSSC).
- Extensive infrastructure needed.
- Utility responsible for repairs and replacement of the public portions of the system. Owner responsible for on-site portion.
- Serve 103 of 542 properties in the study area (19 %).

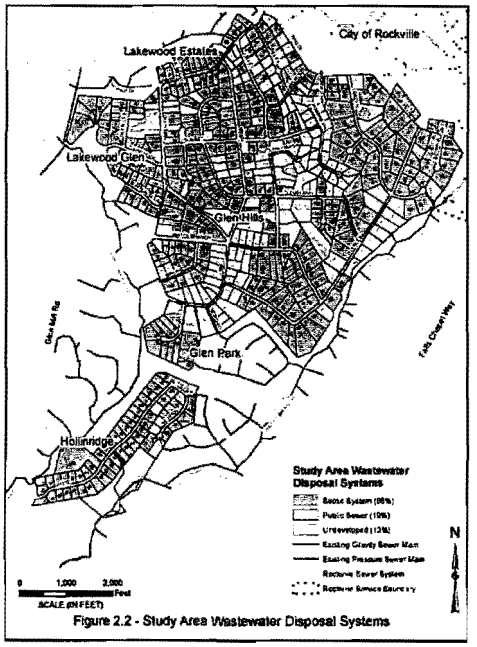

Figure 2.2 - Study Area Wastewater Disposal Systems

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Septic Systems

Types of Septic Systems:

- Conventional (for replacement or new construction)
  - Shallow and Deep Stone Trench
  - Sand Mound
- Alternative (only for replacement)
  - Shallow Drip Dosing
  - Holding Tank*
- Outdated (designs no longer used)
  - Seepage Pits/Dry Wells
  - Seepage Lagoons

**Not a functioning septic system; only holds wastewater until pumped out*

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Septic Systems

370 properties using private septic systems

Septic systems in the study area by type:

No.	Type
CURRENT DESIGN SYSTEMS*	
185	Deep stone trench
16	Shallow stone trench
4	Sand mound
9	Drip disposal
214	**Total**
OUTDATED & UNKNOWN SYSTEMS	
126	Seepage pits
5	Seepage lagoons
25	Unknown type
156	**Total**

**Do not necessarily satisfy all current standards, such as reserve areas*

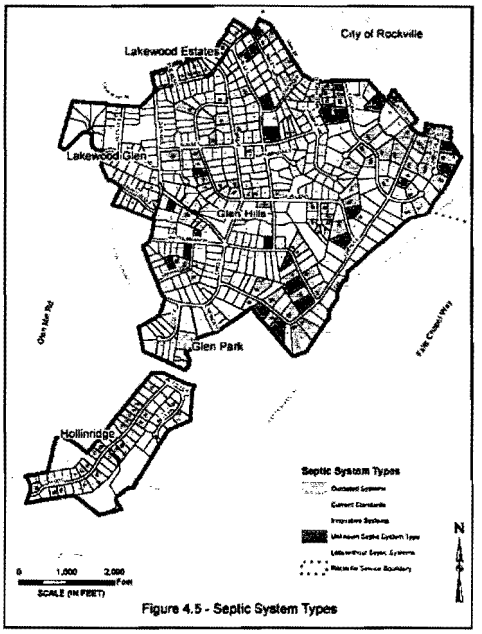


Figure 4.5 - Septic System Types

12

Septic Systems

Septic Regulations

Major septic system regulation changes:1960s to today

- 1965: County verification of private septic testing is required; successful septic percolation testing is required to record a building lot.
- 1975: Water table testing and established reserve areas are required.
- 1980: Testing for subsurface rock is required.

194 of 370 (52%) of area septic systems were installed prior to 1975.

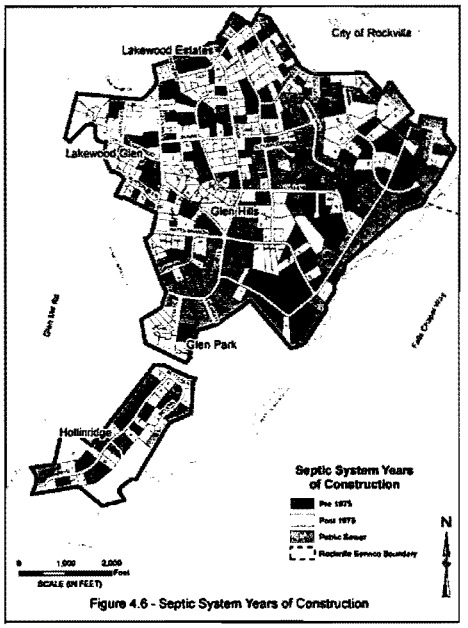


Figure 4.6 - Septic System Years of Construction

Septic Systems
Age of Glen Hills Systems

Most Recent Date of Septic System Construction	Age of System* (Years)	Number of Lots	Percent of Total
1945 – 1965	47 – 67	139	37%
1966 – 1974	88 - 46	55	15%
Subtotal: prior to modern standards		***194***	***52%***
1975 – 1979	33 – 37	44	12%
1980 – 2002	10 – 32	92	25%
2003 – 2012	0 - 9	25	7%
Subtotal: under current standards		***161***	***44%***
No record of construction date		15	4%
Total Septic Systems		370	100%

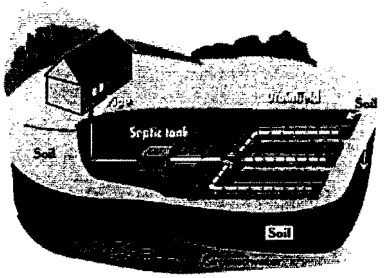
**Referenced to 2012*
From Phase 1 Report – Table 4.2

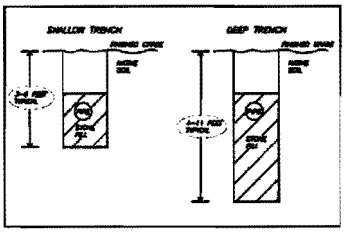
Septic Systems

CONVENTIONAL SYSTEMS
In-Ground Trench Systems

Basic septic system elements:

- Septic tank
- Drainfield
- Soil under the drainfield





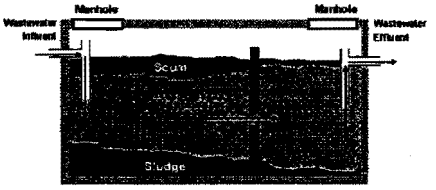
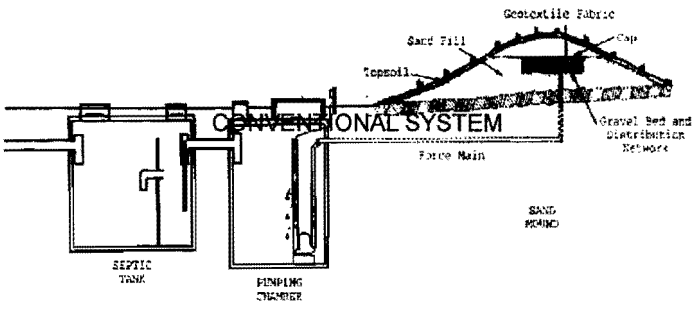


Figure is Illustration by Thomas H. Miller

15

Septic Systems

CONVENTIONAL SYSTEMS
Sand Mound Septic Systems



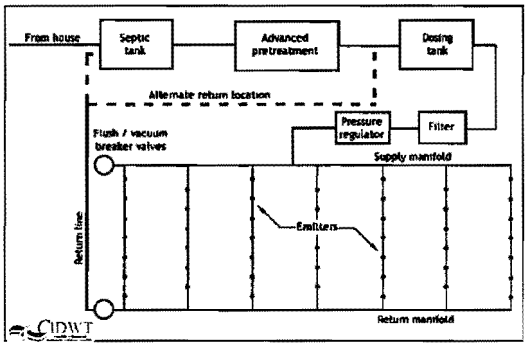
- Installed above existing ground
- Pumping system required

16

Septic Systems Uncovered

ALTERNATIVE (NON-CONVENTIONAL) SYSTEMS
Shallow Drip Dosing System: *Replacement Only*

- **Small-diameter tubing with holes disperses effluent**
- **Depth: 1 to 2.5 feet**
- **Used for replacement systems only, not for new construction**



Plan view of a typical residential drip distribution system using advanced (aerobic) treatment

17

Septic Systems

Outdated Design: Typical Seepage Pit Septic System

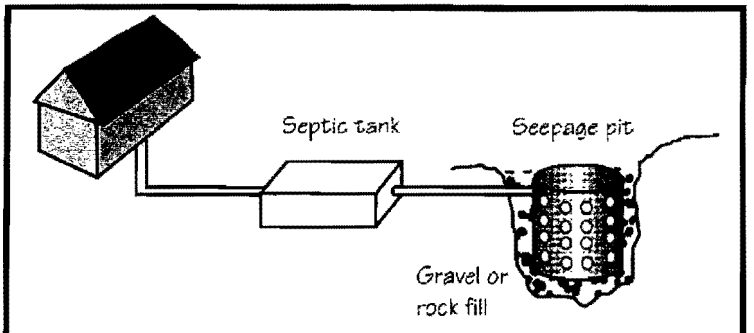


Figure 3. Illustration courtesy of the United States Environmental Protection Agency.

18

Study Area Public Sewer Service

103 properties using public sewer service.

19 lots designated as S-6 abut existing sewer mains.

Three sources of public sewer service:

- WSSC: Watts Branch system
- Rockville: Watts Branch system
- WSSC: Piney Branch system

Sewers extended:

- Prior to 2002 master plan*
- For relief of failing septic systems

** Allowed service for lots abutting sewer mains*

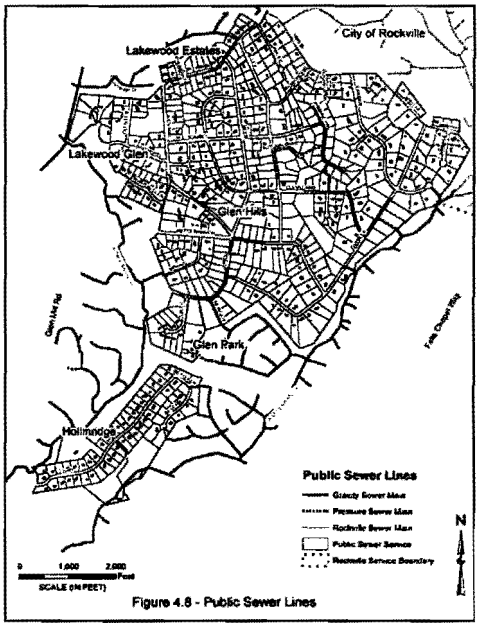


Figure 4.8 - Public Sewer Lines

19

Glen Hills Study

Planning level study, not a lot-by-lot septic system survey

Use existing data to evaluate long-term sustainability of deep stone trench septic systems in the study area

- DPS septic system permit records
- USDA soil maps
- Mont. Co. on-site systems regulations

Identify long-term solutions

- Other types of septic systems (shallow trench, sand mound, & drip dosing systems)
- Limited extension of public sewer service where needed

20

Phase 1 Findings

Reported Septic System Failures and Replacements

DPS permit records showed:

- 52 reported septic system failures*
  - 19 cases have had one replacement system
  - 8 cases have had more than one replacement system
  - 16 cases connected to public sewer service
- 55 septic system replacements without reported cause

  82 properties with permitted system replacements (22% of 370 properties with existing systems)
- 33 reported component failures, not system failures (i.e. tank or pipe replacement only)

**Septic system failure removes the area of the existing failed system from use for new drainfield*

21

Phase 1 Findings

Reported Septic System Failures and Known Replacement Systems (1945 – 2012)

See previous slide for details

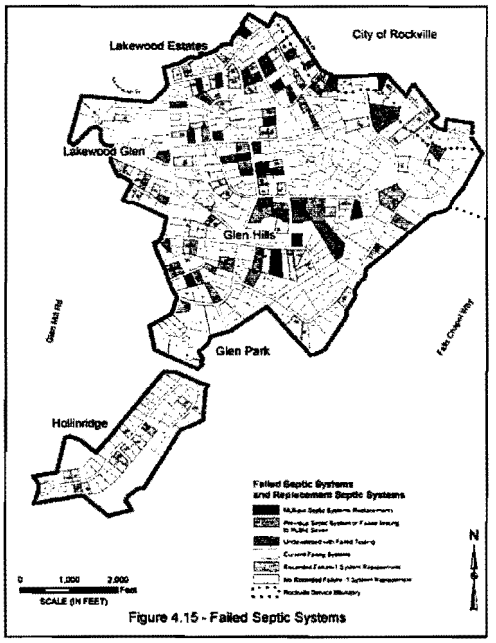


Figure 4.15 - Failed Septic Systems

22

Phase 1 Findings

- Numerous parameters have to be satisfied in order to allow for the permitting and installation of a new or replacement septic system. These parameters are determined by State and County regulations as necessary to protect human and environmental health.
- Any one parameter can prevent permit approval for a septic system.
- Factors considered contributing to septic system suitability:
  - Soil conditions (field testing) – permeability, groundwater and bedrock depth
  - Regulatory conditions – setbacks from streams, buffers, and floodplains; steep slopes; setback from domestic water wells and other septic systems
  - Lot size/other limits – lot size (RE-1 standards), areas constrained by old septic systems

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Phase 1 Findings

Constraint Map Examples

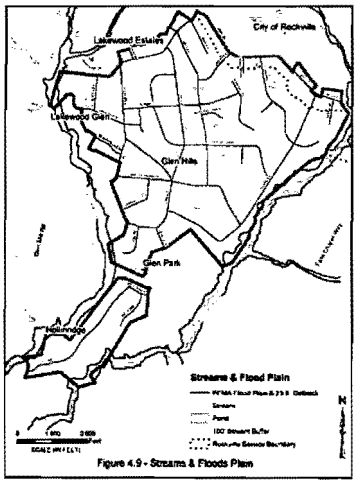

Figure 4.9 - Streams & Floods Plain

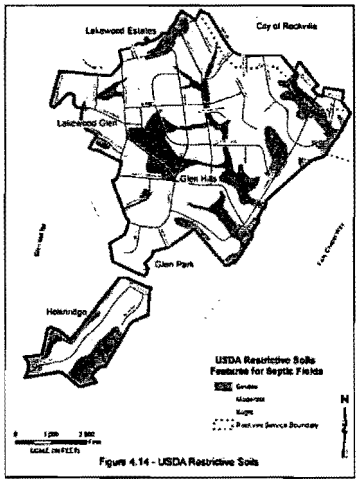

Figure 4.14 - USDA Restrictive Soils

24

Phase 1 Findings

Individual restrictive parameters were overlaid and compiled into the Septic System Review Areas: areas where potential constraints due to one or more limiting parameters may affect the long-term use of deep stone trench septic systems.

Review Areas:

- Potential constraints in approx. one-third of the study area.
- No known potential constraints in approx. two-thirds of the study area

The entire study area is not considered as a public health problem area.

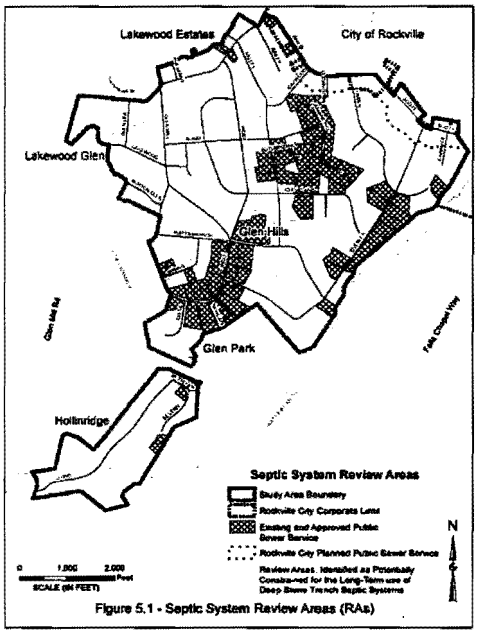

Figure 5.1 - Septic System Review Areas (RAs)

25

Phase 2 Findings

If replacement of an existing, failing septic system cannot be accomplished with a new deep stone trench system, options are ...

- Use of public sewer service if directly available
- Use of another type of septic system:
  - Shallow stone trench (shallow tile) system*
  - Sand mound system*
  - Shallow drip dosing system*
- Use of limited extension of public sewer service, if needed

* All three types of these septic systems are currently in use within the study area.

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Phase 2 Findings

If construction of a new house or expansion of an existing house cannot be accomplished with a deep stone trench septic system, options are ...

- Use public sewer service if directly available
- Use another type* of septic system:
  - Shallow stone trench (shallow tile) system**
  - Sand mound system**

* Shallow drip dosing systems cannot be used for these purposes under State regulations

** Both types of septic systems are currently in use within the study area.

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Phase 2 Findings

- Existing sewerage systems: 19 lots designated as S-6 currently abut existing sewer mains.
- Sewerage system extensions, if needed: Conceptual designs to illustrate how new mains could be extended in an environmentally acceptable manner, if needed, for Phase 2. Designs focused on extending new mains to the Review Areas identified in Phase 1. Criteria:
  - Extensions for areas with existing septic systems. None were designed to only serve vacant properties.
  - Extensions were located along existing public road rights-of-way, avoiding as much as possible environmentally sensitive stream valleys.
  - Extensions maximize the use of gravity service where possible. However, some areas required pumping systems and pressure sewers in order to avoid stream valleys.
  - Extensions avoid the need for easements across private properties.
  - Extensions were not considered that would only serve Review Areas within Rockville's sewer service envelope

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Phase 2 Findings

Contractor designed 13 separate conceptual sewer extension systems to show how service might be extended to serve Review Areas , if needed.

- 6 extension systems from Piney Branch sewerage system
- 7 extension systems from Watts Branch sewerage system

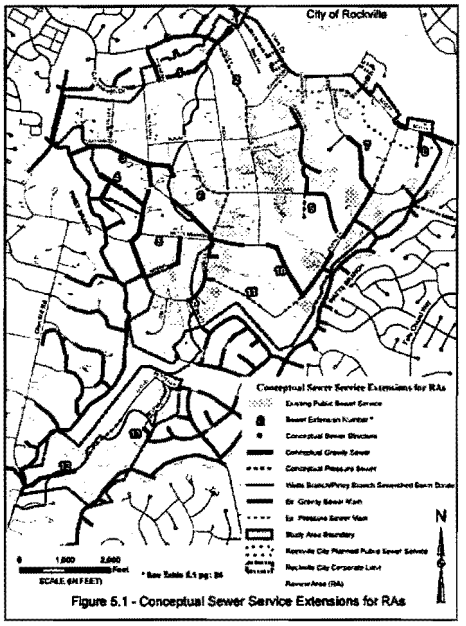

Figure 5.1 - Conceptual Sewer Service Extensions for RAs

29

Phase 2 Findings

- All new main extensions would be initiated by applicants requesting public sewer service. Neither WSSC nor Montgomery County program new local water and sewer main construction.
- Extensions are paid for by applicants and, in some cases, abutting property owners. Neither WSSC nor Montgomery County pay for new local water and sewer mains.

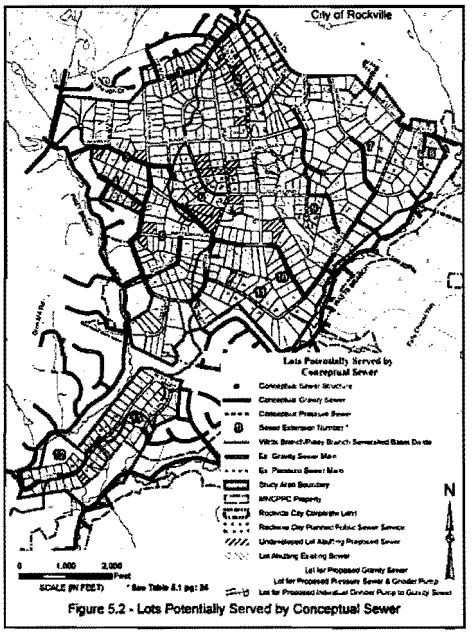

Figure 5.2 - Lots Potentially Served by Conceptual Sewer

30

Phase 2 Findings: Public Sewer Costs & Policies
WSSC's Two Service Extension Programs

WSSC-Built

- Used for service to single, existing properties and relief of health problems
- Designed and constructed by WSSC
- Financing provided through WSSC
- Before mid-1990s used for virtually all extension projects; major project assessments subsidized smaller projects
- No new WSSC-built projects initiated for 10 years; costs are too expensive for individual property owners

System Extension Permit (SEP)

- Used by all developers for new subdivisions Can be used for service to single properties and relief of health problems
- Designed and constructed by the applicant, then dedicated to WSSC
- Financing arranged for by the applicant, not WSSC
- Created in mid-1990s to reduce WSSC bonded indebtedness
- Now used for virtually all new main extensions

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Phase 2 Findings: Public Sewer Costs & Policies
WSSC's Two Service Extension Programs

WSSC-Built

- Extensions costs paid to WSSC in two parts:
  - Annual front-foot benefit (FFBC) assessment on all abutting properties*
  - Deficit charge paid by the applicant (can be deferred)

**WSSC delays FFBC payments for S-6 properties and until S-1 properties with functioning on-site systems connect to WSSC service*

- FFBC rates have not kept pace with WSSC extension costs, resulting in overwhelming deficit costs for applicants sewer.

(continues at right)

SEP

- Extension costs paid for by developer/applicant usually through a financing company; served property owners pay that company an annual assessment
- Intervening properties typically not offered new service; however, they only pay connections costs for later service, no extension costs

---

WSSC-Built (continued)

Current sewer FFBC rate = $7.18/ft/yr.

100 ft. frontage x $7.18/ft/yr x 20 yrs = $14,360

Compare to:

- 100 ft. sewer main @ $500/ft. = $50,000
- 100 ft. sewer main @$1,000/ft = $100,000

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Sewer Policy Issues

Existing service policy from the 2002 master plan:

- Wastewater disposal is via on-site septic systems
- New public sewer service is allowed only for cases involving failed septic systems

Glen Hills Sanitary Study Goals:

- Develop the measures necessary to ensure the long-term sustainability of septic service
- Provide solutions to allow septic system service for new construction and additions to existing homes
- Address limited sewer extensions, if needed, in an environmentally acceptable manner
- Address use of the "abutting mains" policy

33

Sewer Policy Issues

Recommendations consistent with Water & Sewer Plan policies and master plan recommendations.

County Executive's Service Policy Recommendations:

- Continue to use **on-site septic systems** as the primary means of wastewater disposal, consistent with RE-1 Zoning
- Continue to allow public sewer service for relief of **failed septic systems that cannot use a replacement system**.
- Allow DEP and DPS to consider and recommend to the Council **public health problem areas**. All properties within a designated area are moved to from S-6 to S-3 and can apply for public sewer service. Public health problem areas will not be limited to only the Phase 1 Review Areas.

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Sewer Policy Issues

County Executive's Service Policy Recommendations (continued):

- Allow the use of the **"abutting mains" policy** to provide for singe sewer connections to qualifying properties. This has the potential to allow for sewer service to currently vacant lots.
- Maintain the provisions of the **Piney Branch Restricted Sewer Service Policy** for those parts of the study area within the Piney Branch subwatershed.

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Potomac Subregion Master Plan (2002)
Excerpt

- **Acquire the Miller & Smith (Pepco) property (258 acres) as conservation park land.**

- **Acquire by dedication significant portions of the Tipton tributary properties in the lower Greenbriar Branch as conservation park land. These properties include the Tipton, Piney Grove, Weihe, and Semmes properties. Priorities include the Greenbriar Branch mainstem riparian areas along with the forested area west of the gas line easement.**

- **Acquire by dedication portions of the Hanson Farm along the border of Muddy Branch Stream Valley Park, including the northern corner where a trail connection is desirable and where the mainstem is close to the property line.**

- **Protect the riparian area along the Turkey Foot tributary of Muddy Branch through acquisition, dedication or conservation easement.**

- **Acquire forested property (parcel 170) adjacent to Muddy Branch Stream Valley Park land at the end of Cervantes Avenue and with access from Esworthy Road.**

- **Acquire property south of Esworthy Road (parcel 121), surrounded by the Muddy Branch Stream Valley Park.**

- **Acquire the surplus school site located inside the bend on Brickyard Road to protect scarce forested land in this densely developed area.**

- **Designate the 97-acre Callithea Farm (Figure 3) bordering Blockhouse Point and the Chesapeake & Ohio Canal National Historical Park as park land that will include a publicly owned horse farm.**

- **Explore designation of part of Gokturk Woods, on Berryville Road in Seneca Village, as a neighborhood conservation area.**

Sewer Service Policies

A critical policy related to water quality is the provision of community sewer service. Providing community sewer service to relieve failed septic systems minimizes groundwater contamination. However, the provision of community sewer service can damage the environment and water resources by facilitating development to the maximum zoning density. Extensions along stream valleys can also create habitat disturbance, threatening species survival, and can adversely affect the natural hydrologic system due to wetland fragmentation. Once sewer lines are in place, their structural integrity may deteriorate over time, resulting in sewage leaks and further disturbance to the ecosystem. This is particularly troublesome where eroding or shifting stream channels expose sewer mains and manholes, leaving them more susceptible to damage.

In general, the County's water and sewer policies allow the provision of sewer service only to those areas zoned for moderate to dense development (i.e., greater than or equal to one unit per 20,000

square feet). However, at the recommendation of the 1980 Master Plan, sewer service has been provided to some areas zoned for one- and two-acre lots, creating both a policy dilemma and, in some cases, environmental damage. Typically, low zoning densities (such as RE-1 and RE-2) are used to protect the natural environment by minimizing development impacts. Low and, in some cases medium, density areas (such as R-200) are dependent on septic suitability, often resulting in actual development yields well below the maximum allowed by zoning. Extending sewer lines into these areas has the potential to allow development density at or near the zoned maximum, to disrupt the environment and to provide rationale for further extensions and greater density. One of the greatest challenges facing the Potomac Subregion and this Master Plan has been to develop compatible land use and sewer service recommendations which protect the Subregion's environmental quality. The section addressing sewerage systems provides detailed recommendations regarding these sewer service issues.

Community sewer service in the Subregion is provided through trunk lines which parallel most of the major tributaries. These trunk mains drain to the Potomac Interceptor, a large sewer line that parallels the Potomac River and conveys sewage to the Blue Plains Treatment Plant in the District of Columbia.

The County's policies on the provision of community sewer service are governed by the *Water and Sewer Plan*, the County's *General Plan*, master plans, the State's Smart Growth policies, and other policy documents. Master plans recommend where sewer service is to be provided, generally in areas of dense development, consistent with *Water and Sewer Plan* policies. The *1980 Potomac Subregion Master Plan* is one of the County's few master plans recommending sewer service for zones such as RE-1 and RE-2, an exception to the general policies for sewer extension. The County Council has asked that as part of the Potomac master plan update, the Planning Board study the effects of sewer service in these areas on land use, infrastructure, the environment, and budget.

Low-Density Areas

In part, the 1980 Potomac Master Plan's intent was to use community sewer service to take maximum advantage of the allowed density in lower-density zones such RE-1 and RE-2 where it was appropriate. Much of the undeveloped area zoned RE-1 and RE-2 was placed in master plan sewer stage IV where the provision of community sewer service was evaluated case-by-case on the basis of logical, economical, and environmentally acceptable service. Twenty years later, a comprehensive evaluation indicates that providing community sewer service to areas zoned for one-and two-acre development, and contrary to smart growth policies, has undermined the environmental emphasis of zoning areas for low-density development, especially where septic suitability is marginal. With increasing demand for homes and recent development and redevelopment trends, especially where sewer service is provided, this exception to the general sewer service policy is no longer effective. Much of the remaining undeveloped RE-1 and RE-2 land is beset by environmental constraints limiting development potential without sewer.

Under the prior master plan, the Subregion has experienced substantial provision of community sewer service to lower-density areas. Because of this, and because the County considered the approvals for much of this service on a case-by-case basis, the current Potomac community sewer

envelope is irregular, established by demand rather than by plan. Voids within the envelope and irregular boundaries along its perimeter abound. Although this Master Plan generally recommends against the continued provision of community sewer service to low-density (RE-1 and RE-2) areas, it does support limited approvals for community sewer service for the low-density areas within the envelope and along its currently-established edge. The focus of this limited service and expansion should be on properties which already abut existing or proposed mains and on properties which can be served by sewer extensions within public rights-of-way. Main extensions that would disrupt streams and their undisturbed buffer areas should be avoided. Any approvals granted along the currently-established edge should not be cited as justification for expanding the sewer service envelope beyond the limits recommended in this Plan.

Sewer Service Recommendations

- **Provide community sewer service in the Subregion generally in conformance with *Water and Sewer Plan* service policies. This will generally exclude areas zoned for low-density development (RE-1, RE-2, and RC) not already approved for service from further extension of community service.**

- **Allow for the limited provision of community sewer service for areas zoned RE-1 and RE-2 within and at the periphery of the proposed sewer service envelope. (See Foldout Map D.) Exclude from this peripheral service policy properties adjacent to and in the vicinity of the Palatine subdivision and the lower Greenbriar Branch properties, and all properties within the Piney Branch Subwatershed, the Darnestown Triangle, and the Glen Hills Area (until completion of the study described on page 24, which will evaluate whether this exclusion should continue in the future). Emphasize the construction of sewer extensions, if needed, along roads rather than through stream valleys.**

- **Help to protect water quality in the Stoney Creek subwatershed of Watts Branch by requiring that sewer main extensions to serve the few properties approved for community service be located along River and Stoney Creek Roads, rather than along the stream valley.**

- **Deny the provision of community sewer service to the areas zoned R-200 near the intersection of River and Seneca Roads.**

Glen Hills Area

The Glen Hills area consists of several established subdivisions with lots generally at least one acre in size. Most of the lots were established in the 1950's and 60's using septic systems. At that time, septic standards did not include septic buffers, water table testing, multiple depth testing, and the consideration of fractured rock. The Department of Permitting Services (MCDPS) has raised concerns about the periodic septic failures which occur in the neighborhood because subsurface conditions often do not allow for replacement systems which satisfy current septic regulations. This Plan supports a study of the septic failures in Glen Hills to develop the measures necessary to ensure

the long-term sustainability of septic service for new home construction and existing home renovations, and to address the need for limited sewer extensions if needed. This study, conducted in conjunction with the citizens of this area and the appropriate public agencies, shall include the following elements:

- Delineation and possible reasons for known septic failures.
- Groundwater testing if needed.
- Preparation of a logical and systematic plan for providing community sewer service if needed.
- Emphasis on extension of sewer mains within public right-of-way rather than within stream valleys.
- An evaluation and recommendation of the abutting mains policy for this area.
- Exclusion of properties that are environmentally sensitive and cannot be developed in conformance with established environmental guidelines.

This Plan recommends restricting further sewer extensions in Glen Hills to those needed to relieve documented public health problems resulting from failed septic systems. New sewer main extensions needed to relieve public health problems will be evaluated on a case-by-case basis for logical, economical, and environmentally sensitive extensions of service, with an emphasis on locating main extensions along public right-of-way, rather than stream valleys. Because of the concern that the sewer envelope will expand inappropriately, the abutting mains policy should be deferred subject to the results of the Glen Hills study.

Glen Hills Recommendation

- **Conduct a study described above of the Glen Hills area. Based on the results of that study develop a policy outlining the measures needed to ensure the long-term sustainability of septic service for new home construction and existing home renovations, minimizing the need for future sewer service extensions. Under this policy the sole basis for providing new sewer service would be well-documented septic failures where extension could be provided consistent with results of the study and in a logical, economical, and environmentally acceptable manner. Until a policy is developed, restrict further sewer service extensions in Glen Hills to properties with documented public health problems resulting from septic system failures.**

Piney Branch Subwatershed

The Piney Branch subwatershed presents a specific sewer service issue. Shallow bedrock and poor percolation rates severely limit development potential in the Piney Branch, Sandy Branch, and Greenbriar Branch basins unless sewer service is provided. However, these areas tend to have fragile or rare plant and animal communities as well as good water quality. The Piney Branch Trunk Sewer was constructed to serve development generated by TDRs in the upper subwatershed in North Potomac. Concerned over the potential environmental damage that could result from increased development density due to the availability of community sewer service along the rest of Piney Branch, the Council adopted a restricted sewer access policy for the subwatershed. This restricted

sewer service policy supercedes both the *Water and Sewer Plan's* countywide sewer service policies and the master plan's general sewer service recommendations. Introduced into the *Water and Sewer Plan* in 1991, the policy establishes specific conditions that properties within the Piney Branch subwatershed must satisfy for the provision of community sewer service.

This Plan supports the restricted sewer access policy, but with three modifications. Two of these modifications will allow the County to consider the provision of community sewer service to all properties in the upper part of the watershed which were intended as part of the 1980 Master Plan sewer service area, designated as master plan sewer stages I and II. The current policy unintentionally prevents some of these properties from receiving service, even in cases where sewer mains abut the sites. The modifications will also allow single home sewer hookups within the Piney Branch watershed for existing lots that abut and predate an existing sewer main.

The third modification would allow public sewer service, with a pressure system, for four parcels at the southeast quadrant of Boswell Lane and Piney Meetinghouse Road in the west Piney subwatershed. (See Land Use and Zoning Plan - PMH Joint Venture, Fling, and Casey Properties.)

Piney Branch Subwatershed Recommendations

- **Confirm the existing restricted access sewer policy in the *Comprehensive Water Supply and Sewerage Systems Plan* for the subwatershed with three exceptions:**
    - **Amend Piney Branch Restricted Access Policy to allow single home sewer hookups in the Piney Branch subwatershed for existing lots that abut and predate an existing sewer main. This exception is for single houses only and shall not be used to allow for multiple sewer hookups for subdivision/resubdivision of existing properties.**
    - **Former Stage I and II Properties – Provide sewer to former sewer Stage I and II properties that were not TDR receiving areas and therefore not generally eligible for community sewer service. These properties are now enclaves in the existing sewer envelope among the moderate- and high-density development in northern Piney Branch.**
    - **Provide public sewer service in the RE-2C Zone for a cluster development at the southeast quadrant of Boswell Lane and Piney Meetinghouse Road. (See Land Use and Zoning Plan - PMH Joint Venture, Fling, and Casey Properties.)**

Darnestown Triangle

The Darnestown Triangle area is formed by Darnestown Road (MD 28), Turkey Foot Road, and Jones Lane. Although zoned R-200, the 1980 Master Plan recommended that it remain served by septic systems rather than by community sewerage systems. The recommendation was intended to yield a variety of lot sizes based on suitability for septic systems. This Plan reconfirms the recommendations in the 1980 Plan to retain R- 200 zoning without community sewer. (See Land Use section.)

OFFICE OF THE COUNTY EXECUTIVE
ROCKVILLE, MARYLAND 20850

Isiah Leggett
County Executive

MEMORANDUM

June 2, 2015

TO: George Leventhal, President
Montgomery County Council

FROM: Isiah Leggett, Montgomery County Executive

SUBJECT: Transmittal of a Water and Sewer Plan Text Amendment for the Glen Hills Area Sanitary Study

This transmittal provides the County Council with a proposed Water and Sewer Plan amendment that converts my sewer service recommendations for the Glen Hills Study Area into a format for inclusion with other service policies in the Plan text.

On March 30, 2015, I provided the County Council with a memo summarizing the results of the Glen Hills Area Sanitary Study. That memo also provided my recommendations for sewer service policies for the Glen Hills Study Area. These recommendations were developed in order to begin the Council's consideration of sewer service policies for the study area, as called for in the 2002 Potomac Subregion Master Plan.

Keith Levchenko of the Council's staff subsequently advised my staff that the Council preferred to address the Glen Hills area sewer service policy issues in the context of a Water and Sewer Plan text amendment. Using the recommendations from my previous memo, the Department of Environmental Protection (DEP) prepared the attached text amendment package for the Council's consideration.

For convenience, a copy of my March 30, 2015, memo is included with this package. The Phase 1 and Phase 2 Glen Hills Area Sanitary Study reports are available for review and download at DEP's Glen Hills webpage: www.montgomerycountymd.gov/glenhills.

Staff from DEP will be available to discuss the Glen Hills Area Sanitary Study and the proposed text amendment at work sessions with the Transportation, Infrastructure, Energy, and Environment Committee and with the full Council.

IL:as

Attachment

c: Virginia Kearney, Acting Director, Water Management Administration,
Maryland Department of the Environment
David Craig, Secretary, Maryland Department of Planning
Casey Anderson, Chair, Montgomery County Planning Board
Jerry Johnson, General Manager, Washington Suburban Sanitary Commission
Lisa Feldt, Director, Department of Environmental Protection
Diane Schwartz Jones, Director, Department of Permitting Services

PROPOSED TEXT AMENDMENT CPTA 15-CH1-01T

Chapter 1, Table 1-T3: Special Master Plan Water and Sewer Service Recommendations

Glen Hills Study Area Sewer Service Policies

County Executive's Recommendation: **Approve the recommended text amendment to establish sewer service policies for the Glen Hills Study Area.**

Executive Staff Report

On March 30, 2015, the County Executive transmitted recommendations to the County Council for sewer service policies for the Glen Hills Study Area. (See the transmittal memo at pgs. 7 - 14.) The service recommendations were based on the results of the Glen Hills Area Sanitary Study, which was undertaken by the Department of Environmental Protection as recommended in the 2002 Potomac Subregion Master Plan.

The following text amendment takes the Executive's sewer service policy recommendations from the March 30, 2015, memo and converts them into the format of policy language for the Water and Sewer Plan text. It amends existing language addressing the Glen Hills Neighborhoods found in Chapter 1, Section II.E.1., Table 1-T3: Special Master Plan Water and Sewer Service Recommendations.

Introductory language for the text amendment begins below. Table 1-T3 is shown on page 2; only that part of the table addressing the Glen Hills area is included in the amendment. Water and Sewer Plan Chapter 1 service policies referenced in the following amendment are found on pages 3 - 5. A reference map of the study area is provided on page 6.

CPTA 15-CH1-01T

Amendment Key: Underscored Text: Recommended Addition [Bracketed Text]: Recommended Deletion

CHAPTER 1: Objective and Policies

II. POLICIES FOR THE PROVISION OF WATER AND SEWERAGE SERVICE

E. Special Policies for Water and Sewer Service - In addition to the preceding general service policies, the County Council has adopted specific policies for the provision of community water and/or sewer service which create exceptions to the general service policies. The Council has also adopted service recommendations in local area master plans which create exceptions to the general service policies.

1. Master Plan Recommended Exceptions -- The preceding sections discussing general water and sewer service policies noted that local area master plans may recommend exceptions to those general service policies. In order to implement specific development and land use strategies, a master plan may recommend policies for community water and/or sewer service which can be either less restrictive or more restrictive than this Plan's general service policies. When a master plan makes such a recommendation, it must also include an appropriate justification for the recommended departure from the general policies. DEP staff coordinate closely with M-NCPPC staff with regard to the water and sewer service recommendations developed in local area master plans.

These exceptional recommendations are, of necessity, scattered throughout the County's various local area master plans. The following table is intended to consolidate and summarize these recommendations into convenient format and to make them part of this Plan. For additional information concerning these issues, please refer to the master plans cited below.

Table 1-T3: Special Master Plan Water and Sewer Service Recommendations	
General Area Affected	**Master Plan Service Recommendation & Comments**
Potomac Subregion Master Plan (2002)	
Glen Hills Study Area [Neighborhoods (as defined in the 2002 master plan.)]	The 2002 Potomac Subregion Master Plan recommended new community sewer service be limited only to documented public health problems pending the completion of an area-wide sanitary survey by DPS and DEP. With the master plan-requested study completed in 2014, the following service policies apply to the Glen Hills Study Area: • Individual, on-site septic systems are the primary wastewater disposal method consistent with the area's standard-type development under the RE-1 Zone. • Community sewer service can be considered only under the following conditions for: o Properties in need of relief from public health problems resulting from documented septic system failures (Sections II.B.5.b. and II.E.2.). o Properties included within a specifically designated public health problem area (Sections II.B.5.a. and II.E.2.). o Properties that abut existing or planned sewer mains and that satisfy the requirements of the "abutting mains" policy (Section II.E.3.a.) o Properties within the study area and within the Piney Branch subwatershed that satisfy the requirements for community sewer service under the Piney Branch restricted sewer service policy (Section II.E.12.b.). [The master plan recommends that only documented public health problems shall be justification for the approval of sewer service area category changes within this area, pending the completion of an area-wide sanitary survey by DPS and DEP.]

End of CPTA 15-CH1-01T

Excerpts from Chapter 1 Referenced in the Preceding Text Amendment

II. POLICIES FOR THE PROVISION OF WATER AND SEWERAGE SERVICE

The water and sewer service policies addressed in this section of the Plan provide the basis for establishing what areas of the county will receive community versus individual systems service. The Plan uses water and sewer service area categories both to designate areas eligible for either community or private service and to provide a staging element for the provision of community service. These policies provide guidance not only in evaluating individual and general service area change amendments, but also in the preparation of development and water/sewer service recommendations in the County's land use master plans.

The County Council relies primarily on these service policies in evaluating and acting on Water and Sewer Plan amendments. However, the scope of the Council's responsibilities goes far beyond this Plan and includes issues such as the county-wide economic growth, public health and safety, transportation infrastructure, and public education. The Council has the authority and responsibility to consider such issues where they may affect its actions with respect to this Plan. Given this, the Council may reach conclusions regarding this Plan or its amendments which do not necessarily follow the policies provided in the following sections; in such cases, the Council will provide an explanation of the issues involved and rationale for actions that may vary from these standard policies.

B. Water and Sewer Service Development Policies by Service Area Designation – The following policies govern the provision of water and sewer service under each of the County's service area categories:

5. Categories W-5 and W-6, and S-5 and S-6 – Individual water supply or sewerage systems, not of an interim nature, shall be permitted to be installed in any portion of the County designated as categories W-5 or W-6 and S-5 or S-6, consistent with COMAR 26.03.01, 26.03.05, and 26.04.02 - .04, and County Executive Regulations 28-93AM, "On-Site Water Systems and On-Site Sewage Disposal Systems in Montgomery County". Individual systems may be installed within these areas on an indefinite basis without firm obligation to connect to a community system, when and if it becomes available.

Within areas designated as categories W-5 and S-5, the construction of dry community systems shall *not* be required for subdivisions or individual properties which develop using individual on-site systems. DEP may recommend water and/or sewer map amendments to designate subdivisions developing on individual systems as categories W-6 and/or S-6.

Section II.B.5.a.

a. Area-Wide Public Health Hazards – Under conditions that a defined area of the county has an **existing or anticipated health hazard**, DPS, in coordination with DEP, may recommend the construction of a community system for water or sewerage service. Any such community system shall be operated by a public agency and be approved by the County Council as a formal amendment to the plan. The issues and alternatives relative to such a recommendation for properties in categories will be reviewed by DEP as a proposed category change request, initiated by the County.

Section II.B.5.b.

b. Individual Public Health Hazards – Under conditions of an **existing or anticipated health hazard**, as certified in writing by DPS, DEP may require connections of individual structures to a community system if available, and may require service extensions when deemed desirable. DEP will coordinate a category change for the site, usually through the administrative delegation process, although WSSC need not await approval of such an amendment prior to providing community service.

E. Special Policies for Water and Sewer Service - In addition to the preceding general service policies, the County Council has adopted specific policies for the provision of community water and/or sewer

service which create exceptions to the general service policies. The Council has also adopted service recommendations in local area master plans which create exceptions to the general service policies.

Section II.E.2.

2. Community Service to Relieve Public Health Problems -- Community water and/or sewer service may be extended to existing structures to alleviate or eliminate existing or anticipated public health problems, upon certification of such by the Director of the Department of Permitting Services (DPS) or his or her designee. DEP, in coordination with WSSC, shall evaluate whether the provision of community service is reasonable. If appropriate, DEP will direct WSSC to expedite the provision of community water and/or sewer service either by a connection to existing mains or by the extension of new mains in order to relieve the public health problem. Under these circumstances, community service will be provided regardless of the existing service area category, and WSSC need not wait for a service area change approval in order to plan, design, or implement the service. DEP may act to approve related service area changes through the administrative delegation process, Section V.F.2.a.: Public Health Problems. In such cases, community service will generally be limited to a single water and/or sewer hookup for existing properties. The provision of community service under this policy shall not be used as justification for the connection of intervening or nearby lots or parcels if they would not otherwise be entitled to connect to community systems. In addition, DEP will coordinate with DPS to identify, as necessary, larger-scale, chronic public health problem areas and to recommend solutions for those problems in this plan. A decision to extend community service will depend on the number of properties affected, the feasibility of service, and the viability of alternative relief methods.

3. Community Service for Properties Abutting Existing Mains -- Under specific and limited circumstances, community water and or sewer service may be provided to properties which abut an existing or approved water and/or sewer main. The provision of community service requires that the property, or a structure on the property must have been established prior to the extension of the abutting main. A residence, business, or institution (church, school, etc.) qualifies as an existing structure; a barn, garage, or other type of outbuilding does not qualify. The provisions of this policy do not include community service for private institutional facilities (PIFs), which must be addressed through the PIF policy (see Section II.E.4.).

Community service must be technically feasible from the abutting main. Major water and sewer transmission mains and sewer force mains cannot support individual service connections and hookups, and therefore do not qualify abutting properties for community service under this policy.

This policy may be used in cases where a property is not otherwise eligible for such service under the general policies of this Plan. Under this policy, the provision of community service is allowed under the following circumstances:

Section II.E.3.a.

a. Single Hookups Only -- A single water and/or sewer hookup only is allowed for an individual property or for a structure which abuts an existing or approved water and/or sewer main. The subject property or structure must predate the abutting main. A change in the property configuration due to the dedication of land for a public use such as a road right-of-way or park land shall not invalidate this allowed single hookup. Neither shall an exchange of land between adjacent, qualifying properties invalidate this allowed hookup, provided the overall number of qualifying lots and therefore allowed hookups remains the same. DEP may grant approval for this single hookup under the administrative delegation policies included in this chapter (Section V.F.2.b.: Properties Abutting Existing Mains).

DEP may direct WSSC to provide an allowed single, residential water and/or sewer hookup upon 1) staff confirmation that the property qualifies for service under this policy, and 2) DEP's receipt a category change request for the property. Only in such cases may DEP approve service from an abutting main in advance of granting the actual service area category approval. Commercial and institutional uses must first receive the required service area change.

12. Special and Restricted Community Service Areas – In addition to the preceding policies, the County may also designate specific areas for or restrict specific areas from community water and/or sewer service in order to achieve specific development goals, to promote environmental protection, or to address other special concerns. These areas are shown in Figure 1-F3 and are listed below:

Section II.E.12.b.

b. Piney Branch Restricted Sewer Service Area – In 1991, the County Council established a policy to restrict the availability of community sewer service in the Piney Branch Watershed, which is designated as one of the county's Special Protection Area watersheds. Through the Piney Branch Sewer Restricted Access Policy, the Council sought to limit the growth of public sewer-dependent development within and near this environmentally-sensitive watershed, particularly within the areas of the watershed zoned for one- and two-acre development. The Council subsequently amended the policy in March 1997 under CR 13-830 and again in October 2002 under CR 14-1481. By these actions, the Council has specifically designated the Piney Branch Trunk Sewer and its tributary mains as **Limited Access** mains (see Section III.A.2.).

This restricted access policy was recently reexamined in the context of interrelated land use, zoning, and sewer service recommendations in the 2002 Potomac Subregion Master Plan; the following conditions reflect the policy changes recommended by the new master plan. In order to be eligible for community sewer service, properties within the Piney Branch watershed must satisfy at least one of the following conditions, i. through vi.:

i. Properties designated as Sewer Stages I or II in the 1980 Potomac Subregion Master Plan;

ii. Properties which the Piney Branch Trunk Sewer Right-of-Way either traverses or abuts, including properties adjacent to, and commonly owned with, these abutted or traversed properties as of December 3, 1991;

iii. Properties with approval or conditional approval for sewer categories S-1 or S-3 as of December 3, 1991;

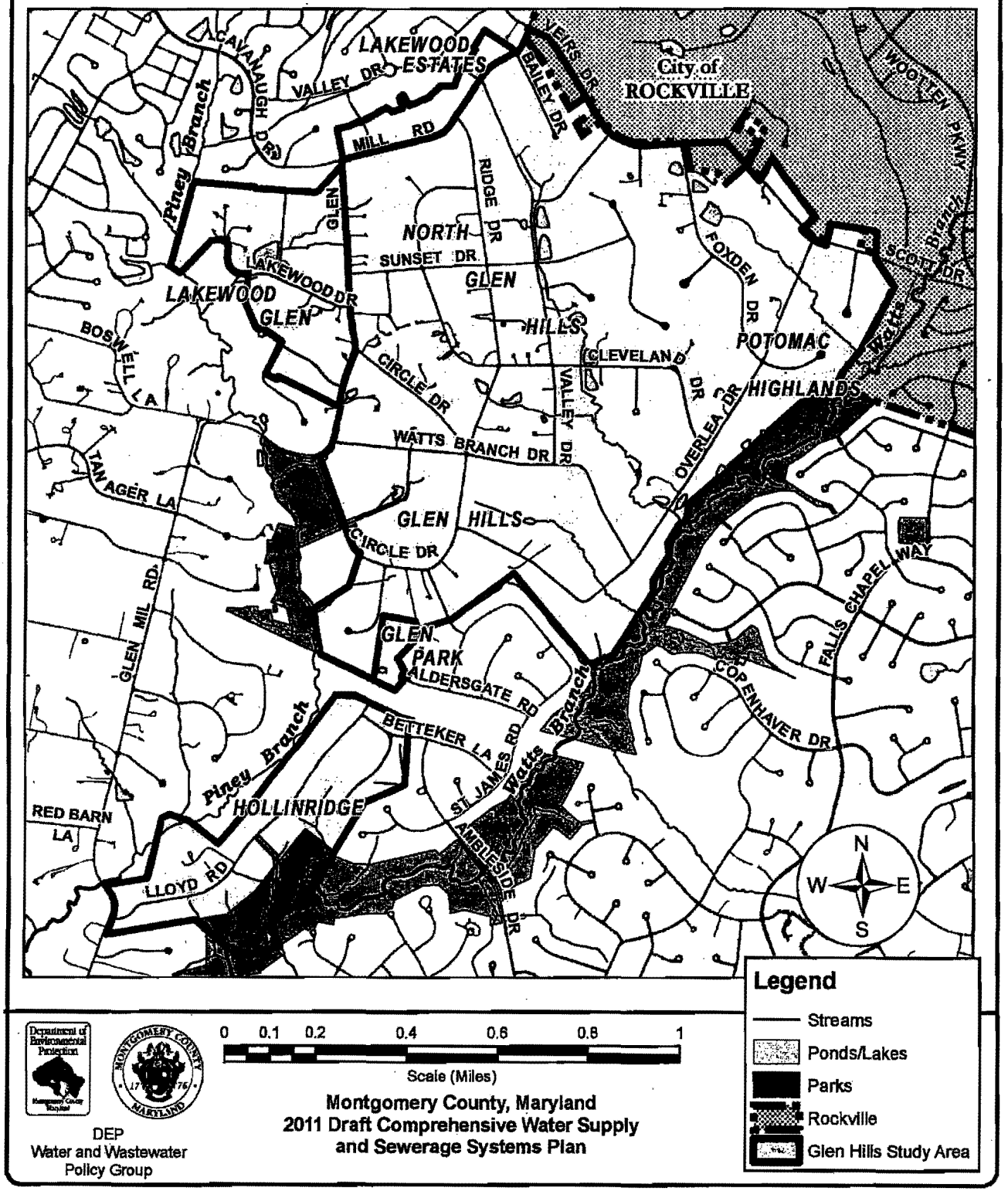
iv. Properties with documented public health problems resulting from failed septic systems where the provision of public sewer service is logical, economical, and environmentally acceptable; or

v. Properties which abut sewer mains and which satisfy the policy requirements for Section II.E.3.a.: Community Service for Properties Abutting Existing Mains – Single Hookups Only. Applicants shall not use the provision of a single sewer hookup to support subdivision or resubdivision of these properties into more than one lot. (This condition does not restrict sewer service provided to properties satisfying condition ii., preceding.)

vi. The properties zoned RE-2C located in the southeast corner of the intersection of Boswell Lane and Piney Meetinghouse Road which develop using the cluster method.

All other properties within the Piney Branch watershed are restricted from community sewer service, whether from the Piney Branch sewerage system or from other adjacent sewerage systems.

GLEN HILLS STUDY AREA MAP



OFFICE OF THE COUNTY EXECUTIVE
ROCKVILLE, MARYLAND 20850

Isiah Leggett
County Executive

MEMORANDUM

March 30, 2015

TO: George Leventhal, President
Montgomery County Council

FROM: Isiah Leggett, Montgomery County Executive

SUBJECT: Transmittal of Reports and Recommendations on the Glen Hills Area Sanitary Study

As directed by the County Council, the Department of Environmental Protection (DEP) has conducted a study of sanitary service in the Glen Hills Area southwest of Rockville based on recommendations provided in the 2002 Potomac Subregion Master Plan. The purpose of this transmittal is twofold:

- To provide the Phase 1 and Phase 2 reports that present the background, methodology, and findings of this study.
- To provide recommendations concerning appropriate sewer service policies for the study area.

DEP conducted this study with the assistance of a local engineering firm, A. Morton Thomas and Associates, following the Council's allocation of funding for the consultant's work starting in FY 2012. Public participation in the study process included three public meetings: one at the start of the study process and then one each at the conclusion of the two study phases. DEP also formed a citizens advisory committee (CAC) consisting of twelve study area residents and property owners. The CAC met seven times during the study process to discuss study issues in more detail then the public meeting forums allowed. DEP maintained a Glen Hills Study webpage on the County's website to post public and CAC meeting notices, provide study updates, and present draft and final versions of the study reports. DEP also used a property owner survey at the start of the study process to gain a general understanding of the public's awareness of septic system use and maintenance.

The Department of Permitting Services (DPS), Well and Septic Section, had previously identified the Glen Hills area as a neighborhood where the replacement of existing, failed septic systems can be problematic. The study area has many vacant lots that at present

cannot be developed due to soil and regulatory limitations for septic systems. These limitations may also restrict a homeowner's ability to improve or replace existing houses. In response to these concerns, the 2002 master plan recommended that the County:

> "Conduct a study described above of the Glen Hills area. Based on the results of that study develop a policy outlining the measures needed to ensure the long-term sustainability of septic service for new home construction and existing home renovations, minimizing the need for future sewer extensions. Under this policy the sole basis for providing new sewer service would be well-documented septic failures where extension could be provided consistent with the results of the study and in a logical, economical, and environmentally acceptable manner. Until a policy is developed, restrict further sewer service extensions in Glen Hills to properties with documented public health problems resulting from septic system failures."

Although not explicitly stated in the master plan, DEP also recognized at the start of this study the need to support the existing housing stock through the replacement of existing septic systems that have failed or will require replacement in the future.

Phase 1

The Phase 1 report presents information on the collection of data concerning existing conditions in the study area, including soil conditions, septic systems type and age, septic testing results, and distribution of existing public sewerage systems. The purpose of this phase was to determine, as best possible from existing information, whether parts of the study area could experience potential difficulties with long-term septic system use and, if needed, replacement of existing septic systems using standard deep stone-trench septic systems. Phase 1 revealed the following among its findings:

- Approximately one-third of the study area is subject to soil conditions and regulatory requirements that may result in difficulties with the long-term use of deep stone-trench septic systems. Those parts of the study area so affected are referred to as "review areas" (RAs). Given the planning-level nature of the study, the determination of a review area does not infer that all land within the RAs is not suited for deep trench septic systems. Conversely, not all land outside the RAs is guaranteed as suited for deep trench septic systems.
- Approximately one-half of the 370 existing, operating septic systems in the study area were permitted and constructed before the advent of modern testing standards, which includes establishing reserve septic field areas as a backup for the initial system. When one of these septic systems fails, there is no established septic drainfield area guaranteed as a viable replacement. A new drainfield area must be established by on-site testing.

Phase 2

Following completion of the Phase 1 work and development of the draft Phase 1 report, DEP developed a scope of work for the Phase 2 portion of the study. The Phase 2 report presents alternatives for providing and maintaining wastewater disposal service for the review areas (RAs) identified in the Phase 1 report.

The underlying assumption in the second phase of the study was that the use of deep stone trench systems within the RAs may not satisfy today's septic regulations. The permitting and construction of this type of septic system could be difficult predominantly due to poor soil conditions including slow percolation rates, shallow depth to ground water, and shallow depth to bedrock. The alternatives to the use of this type of septic system were as follows:

- **Use of other types of permitted septic systems: shallow stone-trench systems, sand mound systems, or drip-disposal systems.** Each of these on-site systems has applications for specific soil constraints, although even taken together they do not necessarily provide solutions for all situations. The use of a specific type of on-site septic system for the replacement or expansion of an existing septic system will require proper soil testing and evaluations to determine that system's suitability for a particular property. Given these testing requirements, the development of alternative solutions for specific sites was not attempted.

- **Provision of public sewer service.** The Phase 2 report showed that only a few of the identified review areas had access to existing sewer mains. For those review areas without available sewer mains, the study contractor designed 13 conceptual sewer extension alignments to show possibilities for providing public sewer service, if needed. Both gravity and low-pressure sewer mains were used in this design work. Low-pressure mains were primarily used where the study criteria from the 2002 master plan directed sewer extensions away from streams, stream buffers, and easements across private properties, and instead towards public road alignments. Note that of the 13 conceptual sewer extension alignments shown in the Phase 2 report none are proposed for approval or construction at this time.

Planning-level cost estimates developed for each of the preceding Phase 2 alternatives showed that, in most cases, the use of an on-site septic system for new or replacement wastewater service, where feasible, provided a less expensive service option than the extension of new mains for public sewer service for property owners. Costs for sewer service connections to an available, existing sewer main were much closer to the range of septic system costs, depending on the type of septic system required for service.

Policy Issues and Recommendations for Septic System Sustainability

The feasibility of permitting a new septic system for any particular piece of property is dependent on the characteristics of the soils and geology of that property. These characteristics (permeability, water table depth, depth to rock, etc.) do not change substantially over time. Soil testing standards for septic systems for the County have become both more encompassing and restrictive over time. This serves to improve the longevity of septic system use and to help mitigate environmental impacts resulting from septic system use in vulnerable areas. (See the Phase 1 report, Section 3.5 and Table 3.1.) Other regulatory standards (drainage and drinking water well setbacks, best available technology requirements, etc.), have also been strengthened to help protect human and environmental health. The DPS permitting process recognizes that a septic system approved and built for a new home—including the initial system and planned replacement fields—is intended to serve that property for an indefinite time. These standards exist to ensure that new development dependent on septic systems does not occur on properties that cannot support septic system use for the foreseeable future.

Recommendation:

- **Consistent with the policy focus of the 2002 master plan, where public sewer service is not currently available in the Glen Hills area, it is typically in the interest of a property owner to explore on-site septic system options, as needed, when needing to replace an existing system or install a system for new development.**

Policy Issues and Recommendations for the Extension of Public Sewer Service

Based on Water and Sewer Plan general service policies, and supported by the 2002 master plan's service recommendations, areas designated for standard-type development under the RE-1 Zone—such as this study area--are not intended for widespread public sewer service. However, the master plan also recognized that the relief of some septic problems within the study area could require the provision of public sewer service. The master plan advocated a sewer service policy that would allow new sewer service only for cases of documented septic system failures. This refers to cases where new sewer construction would be required, as the master plan goes on to specify that sewer extensions would need to be planned and provided in a logical, economical, and environmentally acceptable manner. Other than to relieve public health problems, there are few Water and Sewer Plan special sewer service policy justifications (public facilities, private institutional facilities, etc.) that would have an application for the extension of new sewer mains within the study area.

Typically, the County's designation of a public health problem results from an on-site system failure applying to a single property. However, Water and Sewer Plan policies also direct the County to identify public health problem areas, where appropriate; groupings of properties where existing and anticipated on-site systems problems apply to more than just one property, usually in a relatively small geographic area. The Council's designation of a public health problem area by an amendment to the Water and Sewer Plan usually applies to an area

where public service is not yet provided and often not approved, but needs to become a priority to support public and environmental health. Where the Plan establishes such an area, all properties within it are eligible to pursue the extension of public service, regardless of whether or not an existing failure has occurred. This allows for some public service extension within the health problem area in advance of an immediate failure. The study does not propose the designation of any part of the study area as a public health problem area at this time.

The cost of extending new water and sewer mains currently remains beyond the financial reach of most individual property owners, including those situations where new service is needed to relieve a public health problem resulting from a septic system failure. Under WSSC's current system expansion permit (SEP) process, virtually all new main construction is paid in total by the applicant seeking service, typically a developer constructing a new subdivision. This has drained funding resources away from the older front-foot benefit financed (or "WSSC-built") process, wherein WSSC finances and constructs new mains, to the point where the older process is no longer functional. Staff from Montgomery and Prince George's Counties and from WSSC are working to develop a modified financing system that would again make construction of new main extensions for individual property owners feasible. In cases where the County determines that new public service is needed to relieve health problems, manageable financing is of great importance.

Recommendations:

- **Adopt, but also expand on the policy recommendation from the 2002 master plan; that documented health problems resulting from septic system failures are the only justification for the construction of new sewer main extensions within the study area. Public sewer mains can also be constructed to serve public health problem areas--throughout the study area—that are explicitly designated by the County Council in the Water and Sewer Plan. Two Water and Sewer Plan policies address this situation: the "public health problems" and "properties affected by public improvements" policies (Chapter 1, Sect. II.E.2. & II.E.7., respectively.**
- **Pursue with WSSC and Prince George's County the development of a modified water and sewer main extension process that improves the affordability of main construction for individual property owners.**

One other special service policy that relates to the use of public sewer in place of on-site septic systems is the "on-site system regulation changes" policy (CWSP Chapter 1, Sect. II.E.10.). The policy provides for consideration of public sewer service where changes in testing regulations now render a property previously established and permitted for an on-site system unsuited for septic system use. The substantial majority of lots in the study area were not established on the basis of successful septic system testing. Before 1965, septic testing was not required in order to record a building lot. As a result, this requirement for the application of this

service policy cannot be satisfied. This policy is not proposed to justify sewer main construction to provide new sewer service for unimproved lots within the study area.

Policy Issues and Recommendations for the Abutting Mains Sewer Service Policy

The 2002 master plan specifically recommends that the Glen Hills study include, "An evaluation and recommendation of the abutting mains policy for this area." The "abutting mains" service policy (CWSP Chapter 1, Sect. II.E.3.) involves the provision of public service from existing or approved public mains. To qualify for consideration, a property or a building on the property had to exist at the time the abutting main was or will be installed. This policy typically limits public service to a single sewer hookup for each existing property abutted by a main. While the policy allows for limited public service from an abutting main, new main construction is not the policy's function.

Where public service mains are already provided, or where they are approved, Water and Sewer Plan service policies support limited use of those mains by abutting property owners. In the past, this policy helped to support new main construction, where front-foot benefit charges helped to finance that construction. As noted previously, escalating costs associated the "WSSC-built" process have made its use by individual property owners largely infeasible, including cases where needed a new main is needed to relieve a public health problem. The potential for the participation of abutting property owners in a modified WSSC extension financing system needs to be maintained through the use of the abutting mains policy. Owners of qualifying properties that abut or will abut sewer mains in the study area should have an option to use public sewer service if they choose. Although the cost for connecting to public sewer service can be greater than for replacing a septic system, public service provides a permanent means of wastewater disposal, as opposed to septic systems which will require periodic replacement.

Starting in 2002, County Council actions on sewer category change requests suspended use of the abutting mains policy (CWSP Chapter 1, Section II.E.2.) within the Glen Hills area, as recommended in the 2002 master plan. Currently, 21 properties designated as sewer category S-6, and as such ineligible for public sewer service, abut existing sewer mains within the study area; all are improved with existing single-family homes. Of these, one category change request case filed since 2002 would have benefitted from the ability to use the abutting mains policy.

Recommendation:

- **Restore the use of the abutting mains policy for public sewer service within the Glen Hills study area. Note that no property owner is compelled to connect to public sewer service as long as their property remains in category S-6 and their existing septic system continues to function.**

Information included in the Phase 2 report (Table 5.1, pg. 24) provides details about the number of properties that could be served by each of the 13 sewer main extensions conceptually designed for the purposes of this study to serve the Review Areas. In the unlikely event that all 13 sewer extensions were to be built in their entirety, they could abut and serve as many as 223 properties: 197 already improved with single-family homes using septic systems and 26 unimproved. (The total study area currently includes 370 improved properties using septic systems and 69 unimproved properties.)

Policy Issues and Recommendations for the Piney Branch Subwatershed

The western and northwestern parts of the study area fall within the Piney Branch subwatershed of Watts Branch. (See the Phase 1 report, Figure 2.1, pg. 7.) Starting in late 1991, during planning for the Piney Branch Trunk Sewer, the County decided to implement a restricted sewer service access policy for the subwatershed that sought to limit environmental impacts from sewer-dependent development in the lower, less-densely zoned parts of the subwatershed. This includes some of the properties within this study area. The 2002 master plan does not recommend any changes to the application of the restricted sewer service access policy within the study area. This restricted sewer access policy remains in effect for those parts of the study area included in the subwatershed.

Recommendation:

- **Maintain the Piney Branch restricted sewer service access policy for those parts of the Glen Hills study area that fall within the limits of the Piney Branch subwatershed.**

Additional Master Plan Study Recommendations

The 2002 master plan also recommended that the study include elements such as the delineation and causes of known septic system failures, and the identification and exclusion of environmentally sensitive properties with no development potential. Each of these recommendations and brief discussions about how they were addressed as part of the Glen Hills study are included in the
Phase 2 report; see Sect. 6, pg. 31.

Copies of the Executive Summaries from the Phase 1 and Phase 2 reports are attached with this transmittal. The full reports are available for review and download at DEP's Glen Hills webpage: www.montgomerycountymd.gov/glenhills.

Staff from DEP will be available to discuss the Glen Hills Area Sanitary Study at work sessions with the Transportation, Infrastructure, Energy, and Environment Committee and with the full Council.

IL:as

Atttachments

cc: Jay Sakai, Director, Water Management Administration, Maryland Department of the Environment
David Craig, Secretary, Maryland Department of Planning
Casey Anderson, Chair, Montgomery County Planning Board
Jerry Johnson, General Manager, Washington Suburban Sanitary Commission
Lisa Feldt, Director, Department of Environmental Protection
Diane Schwartz Jones, Director, Department of Permitting Services

MONTGOMERY COUNTY PLANNING BOARD
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

OFFICE OF THE CHAIR

October 5, 2015

The Honorable George Leventhal, President
Montgomery County Council
Stella B. Werner Council Office Building
100 Maryland Avenue
Rockville, Maryland 20850

Dear Council President Leventhal:

At its regular meeting of September 24, 2015, the Planning Board discussed a proposed Text Amendment to the Comprehensive Water Supply and Sewerage Systems Plan for the Glen Hills Area Sanitary Study. The Amendment, proposed by the County Executive, revises the county's Special Policies for the Provision of Water and Sewerage Service, establishing a policy for wastewater disposal in the Glen Hills neighborhood of Potomac.

The Board considered a Planning Staff report recommending approval of the Executive's proposal, heard extensive testimony from Glen Hills residents, including an alternative policy proposal, and discussed the issue with staff and with representatives of the Department of Environmental Protection. Following the discussion and its deliberations, the Board voted 4-1 to endorse modifying the Executive's proposed text amendment to provide a clear and objective standard for evaluating proposed sewer extensions in the area. Chair Anderson, and Commissioners Fani-Gonzalez, Presley and Wells-Harley voted to support the Executive's proposal with this modification; Commissioner Dreyfuss dissented and argued for an immediate sewer category change for the area. The staff report is attached for the Council's use.

In considering the issues presented by the public testimony, the Planning Board faced two important tasks: respecting the Master Plan's development and environmental policies for Glen Hills and providing clearly needed relief for neighborhood residents whose individual systems have failed or are likely to fail in the near future. A majority of the Board concluded that the Executive's proposal should be amended to provide a faster, more certain path to public sewer service when circumstances warrant. The Board believes that the Executive's proposal to establish both a process for considering when new sewer connections should be allowed and a mechanism to pay for them is sound. The Board, however, is persuaded that homeowners whose septic systems are failing should not be required to bear the burden of proving that a grave threat to the public health is imminent in order to qualify for sewer service. If a property owner with a troubled system can demonstrate that their property would not be considered suitable for a new septic system if the property were being developed for the first time, then that homeowner should be considered eligible for sewer service on public

8787 Georgia Avenue, Silver Spring, Maryland 20910 Phone: 301.495.4605 Fax: 301.495.1320
www.montgomeryplanningboard.org E-Mail: mcp-chair@mncppc-mc.org

health grounds. If, on the other hand, a new septic system using currently accepted technologies and design methods is feasible, then septic treatment should continue to be used. The majority believes that this criterion will make it easier for larger areas of the neighborhood to seek relief under the proposed policy by removing ambiguity concerning what evidence or analysis is required to establish eligibility for sewer service based on public health considerations. It will also preserve Glen Hills as a low-density housing resource that generally relies on individual septic systems, as envisioned by the Master Plan.

Should the Council determine that an amendment to the Potomac Subregion Master Plan is needed to address the Glen Hills issue, the Board majority would support such a request.

Commissioner Dreyfuss felt that recent extensions of public service to parts of Glen Hills, combined with public testimony of neighborhood residents to the effect that many systems are failing or have failed and cannot be repaired or replaced, demonstrated a substantial public health problem and that, as a result, relief in the form of logical sewer main extensions for the entire community was warranted now. Mr. Dreyfuss therefore voted to designate the entire Glen Hills area as sewer category S-3, so that planning for public service could begin and be available immediately as existing individual systems fail. Mr. Dreyfuss believes that such a designation would be in accordance with the 2002 Potomac Subregion Master Plan.

The Planning Board appreciates the opportunity to evaluate the Executive's proposed text amendment as part of the Council's review of the matter. Planning staff will be available at the Transportation, Infrastructure, Energy and Environment committee worksession on October 26.

Sincerely,

Casey Anderson
Chair

MCPB
Item No. 7
Date: 9/24/15

Proposed Text Amendment to the Comprehensive Water Supply and Sewerage Systems Plan for the Glen Hills Area Sanitary Study

Frederick Vernon Boyd, Master Plan Supervisor, Area 3, fred.boyd@montgomeryplanning.org , 301 495 4654

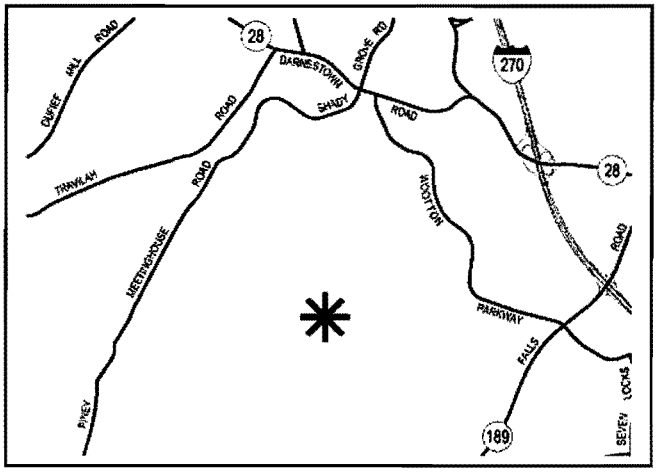
Richard Weaver, Acting Chief, Area 3, richard.weaver@montgomeryplanning.org, 301 495 4544

Date Completed: 9/17/15

Description

Proposed Text Amendment to the Comprehensive Water Supply and Sewerage Systems Plan for the Glen Hills Area Sanitary Study

The County Executive has proposed a text amendment to the Comprehensive Water Supply and Sewerage Systems Plan, following a Department of Environmental Protection study of sanitary conditions in the Glen Hills neighborhood. The 2002 Potomac Subregion Master Plan recommended the study to allow formulation of a wastewater disposal policy for the community, which largely developed using septic systems and has experienced scattered septic system failures.



Summary

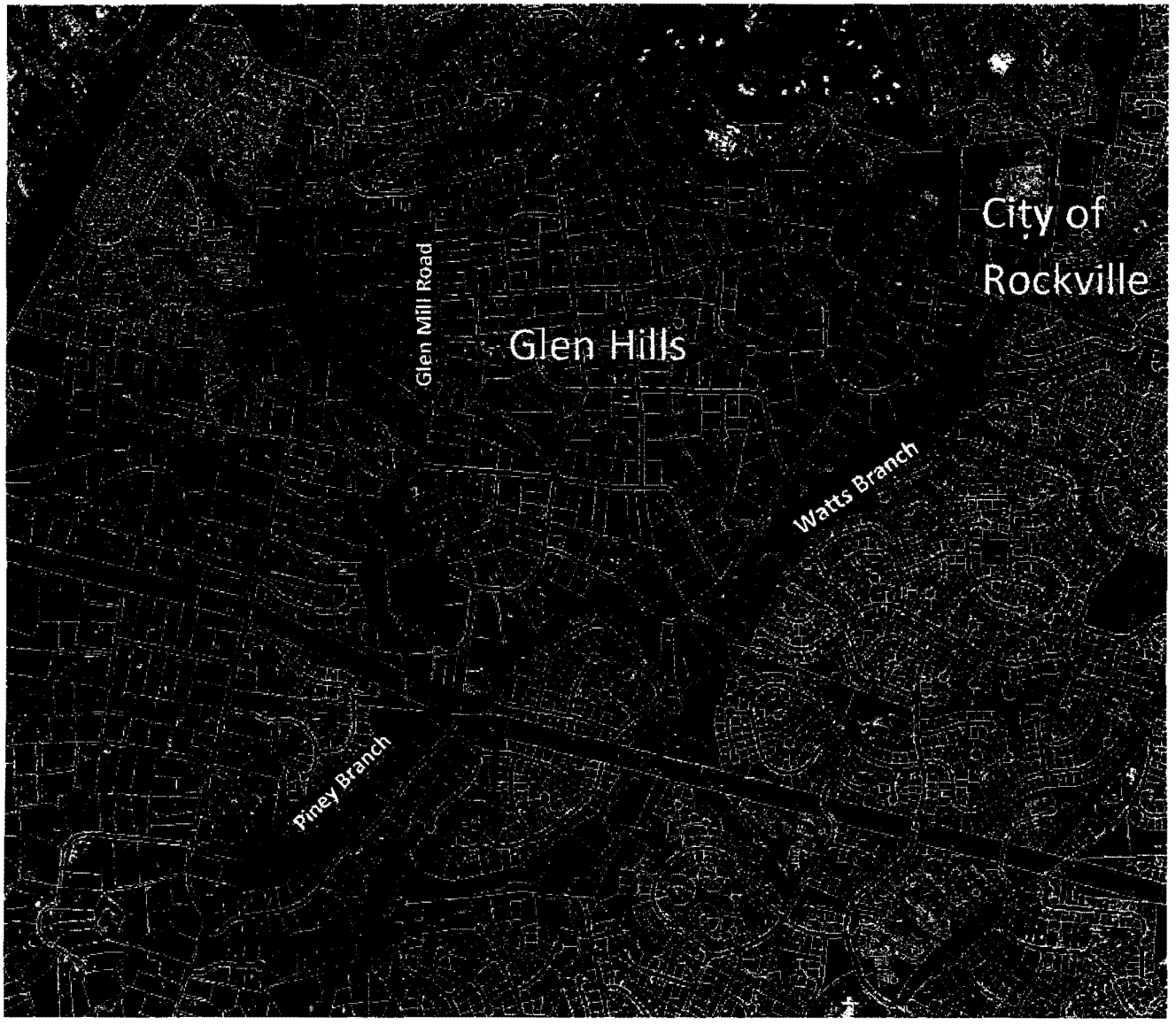
The 2002 Potomac Subregion Master Plan recommended a sanitary study for the Glen Hills neighborhood to allow formulation of a wastewater disposal policy for the community, which largely developed using septic systems and has experienced scattered septic system failures. The Master Plan recommended a sewer extension policy that would limit public sewer service to properties that could demonstrate septic system failures and where sewer service could be extended in an environmentally acceptable manner. The Department of Environmental Protection ("DEP") completed the study in 2013, and the Executive recommended earlier this year that the new wastewater treatment policy establish on-site septic disposal systems as the primary disposal method for Glen Hills. The Executive's proposal also establishes specific conditions for consideration of public sewer service in Glen Hills. The conditions would allow extension of public service when individual property owners can demonstrate septic system failures; when larger areas with public health problems are formally designated; when properties abutting existing or planned sewer mains meet existing policy standards; and for properties with septic failures that are located in the Piney Branch restricted service area.

The County Council held a public hearing on the proposed amendment on September 17. The Council has agreed to hold the public record open to receive the Planning Board's recommendation. The Council's Transportation, Infrastructure, Energy and Environment Committee will discuss the proposed amendment on October 5.

RECOMMENDATION: Approval of the text amendment

BACKGROUND

The 2002 Potomac Subregion Master Plan, in its own words, "is based on environmental principles." (p 33) The Plan reinforces this concept organizationally by locating the Environmental Resources Plan as the first substantive chapter of the Plan. The Plan recognizes the importance of sewer service policies to the environment by including detailed policy recommendations in the Environmental Resources Plan. The Glen Hills area, an enclave adjacent to the City of Rockville, is one of three areas for which the Plan makes specific policy recommendations.



In Glen Hills, these recommendations center on wastewater treatment. The neighborhood developed with septic systems rather than public sewer service. During the 1950s and 1960s, when much of the community developed, standards for septic systems were significantly less strict than they are now, and,

by the time the 2002 Master Plan development process began, some properties in the neighborhood had suffered septic system failures. In response, the Plan supported "a study of the septic system failures in Glen Hills to develop the measures necessary to ensure the long-term sustainability of septic service for new home construction and existing home renovations, and to address the need for limited sewer extensions if needed." (p. 23-4)

The Master Plan (p 24) specified six elements to be included in the study:

- "Delineation and possible reasons for known septic failures.
- Groundwater testing if needed.
- Preparation of a logical and systematic plan for providing community sewer service if needed.
- Emphasis on extension of sewer mains within public right-of-way rather than within stream valleys.
- An evaluation and recommendation of the abutting mains policy for this area.
- Exclusion of properties that are environmentally sensitive and cannot be developed in conformance with established environmental guidelines."

The Master Plan stated that the study should form the basis of "a policy outlining the measures needed to ensure the long-term sustainability of septic service for new home construction and existing home renovation, minimizing the need for future sewer extension." It went on to state that, under the policy, "the sole basis for providing new sewer service would be well-documented septic failures where extension could be provided consistent with the results of the study and in a logical, economical and environmentally sensitive manner." (p 24)

The Department of Environmental Protection hired a consulting firm to do the study, which had two phases. The firm, AMT Consulting Engineers, completed the study in 2013. AMT stated in its final Phase 1 report that "the purpose of this study is to gather and assess data to determine the future reliability and sustainability of septic systems within the study area..." (p. 5). AMT collected and analyzed well and septic permit data and GIS information. The firm confirmed the neighborhood's topography and natural feature locations in the field. Community outreach included public meetings and surveys, as well as the creation of a citizens' advisory committee made up of local residents with varying levels of experience with septic and public sewer systems in the neighborhood.

Phase I of the study used eight parameters, ranging from the age of a property's septic system and the rate at which water percolated through its system to the area's soils classifications and topography. AMT used this information to create maps that it asserted would show areas that were unsustainable for septic systems under any of the eight parameters. The study identified nine failing septic systems in Glen Hills. The study nonetheless concluded that about a third of the study area—36 percent—was unsuitable for septic wastewater disposal under at least one of the eight parameters. It also concluded that half of the operating septic systems in Glen Hills were without reserve drainfields for use when an initial drainfield failed. For these reasons, the Phase I report recommended Phase II to evaluate alternatives for wastewater disposal in the community.

Phase II assumed that satisfying current septic design regulations with a traditional method of septic disposal—deep stone trench systems—could prove problematic. So the study evaluated other types of disposal systems, including shallow stone trench systems, sand mounds and drip disposal systems. The study did not attempt to apply these prospective technologies to specific properties. The study also evaluated 13 conceptual alignments for public sewer throughout Glen Hills. The consultant developed

broad cost estimates for both innovative septic systems and public sewer service, and concluded that septic disposal would cost less than extension of sewer lines.

The study generated considerable controversy. Some residents, in the wake of the study, have advocated for a comprehensive solution to wastewater disposal in Glen Hills, arguing that, while reported septic system failures are few in number, a larger group of property owners have systems that are under considerable stress, leading to problems with odors and difficulties associated with marketing their homes. Opponents of the study coalesced into an informal committee, which was led by Glen Hills residents who had been on the citizens' advisory committee. The group sharply criticized the study's methodology, particularly its reliance on modeling in place of assembling and analyzing information on the actual condition of existing septic systems. The group noted that the Master Plan had recommended both analysis of known septic failures and groundwater testing if needed and asserted that the AMT study had provided neither. The group considered the identification of broad areas as "unsustainable" for septic disposal systems particularly inappropriate, and an illegitimate basis for the Phase II evaluation of conceptual sewer extensions.

After reviewing the study and meeting with local residents, the County Executive made four recommendations:

- To maintain consistency with sewer service policies articulated in the Potomac Subregion Master Plan, and because public sewer service is not generally available in Glen Hills, property owners should first consider septic disposal systems for new development or replacing existing systems;
- Documented health problems caused by septic system failures should remain the only justification for constructing new sewer extensions; if larger areas suffer such failures, existing Water and Sewer Plan policies are available to address such situations;
    - WSSC, Montgomery and Prince George's counties should develop a main extension process that improves affordability for property owners;
- Allow use of the existing Water and Sewer Plan policy for abutting mains in Glen Hills;
- Maintain the existing Piney Branch restricted sewer service access policy for the portions of the Glen Hills study area within that watershed.

ANALYSIS

The text amendment to the Water and Sewer Plan now under review reflects the Executive's recommendations. It clearly indicates that individual, on-site septic systems are and should continue to be the primary means of wastewater disposal in Glen Hills. It strictly limits consideration of community sewer service to four conditions:

- Relief for individual properties with health problems resulting from documented septic system failures;
- Properties in a specifically designated public health problem area;
- Properties that abut existing or planned sewer mains and satisfy the policy requirements in the "abutting mains" policy;
- Properties located in both the study area and the Piney Branch watershed that meet requirements of the Piney Branch restricted sewer access policy.

The proposed text amendment precisely conforms to the policy recommendations of the 2002 Potomac Subregion Master Plan. The Master Plan proposes a policy under which "the sole basis for providing new sewer service would be well-documented septic failures where extension could be provided consistent with results of the study and in a logical, economical and environmentally acceptable manner." (p 24) The text amendment offers four conditions that will enable resolution of future septic system failures by allowing extensions of public sewer service: when septic failures can be documented; when public health problem areas are designated; when properties can meet abutting mains requirements (which requires the property or building on the property to have existed *before* the sewer line was extended to the area); and when the requirements of the Piney Branch restricted service policy can be met. (The Subregion Master Plan recommended modifications to the existing service policy that were included in the Water and Sewer Plan.)

More broadly, the proposed text amendment reinforces the 2002 Potomac Subregion Master Plan's long-standing land use vision for Glen Hills—as a low density residential community whose development using septic systems would contribute to protecting natural resources. Earlier master plans sought to use the provision of sewer service to help set appropriate densities in parts of the Subregion. The 1980 Potomac Master Plan set four stages for providing public sewer service; it placed Glen Hills in stage 4, which would be evaluated only after higher priority areas (generally, unserved areas in the R-200 Zone that could take advantage of existing road capacity and would, at the time, provide moderately priced dwelling units) received service.

By 2002, the Master Plan stated, "a comprehensive evaluation indicates that providing community sewer service to areas zoned for one- and two-acre development, and contrary to smart growth policies, has undermined the environmental emphasis of zoning areas for low-density development, especially where septic suitability is marginal." (p 22) The Plan therefore generally recommended against public sewer service for low-density areas in the RE-1 and RE-2 zones, except for properties at or very near the edge of previously approved areas.

It should be noted that under the Sustainable Growth and Agricultural Preservation Act of 2012, whose goal was to limit the impact of large subdivisions using septic systems on sensitive environmental resources, most of the Glen Hills neighborhood was designated a Septic Tier III area. Tier III areas are generally large-lot residential communities that are not planned for sewerage service. This designation reflects the policy recommendations of the 2002 Master Plan. Glen Hills' Tier III designation is included in the official map displaying septic tiers for Montgomery County. The Council may amend official tiers only through amendments to the General Plan or by amendments to the Subdivision Regulations.

CONCLUSION

The Executive's proposed amendment to the Comprehensive Water Supply and Sewerage Systems Plan is consistent with both the Potomac Subregion Master Plan's specific recommendations for evaluating sewer service in the community and with the Master Plan's broader land use goals for the preservation of low-density residential resources in Potomac. It reinforces the Plan's environmental focus by using septic suitability as a "proxy" for managing densities and allowing environmental constraints to limit the environmental impact of residential development. Planning staff recommends that the Planning Board support the proposed amendment, and transmit comments to the County Council for Council consideration.

Attachment

September 24, 2015

Mrs. Janice Outen
Maryland Department of the Environment
Water Management Administration
1800 Washington Boulevard
Baltimore, Maryland 21230

Subject: Montgomery County Water Supply and Sewerage Systems Plan
Draft Text Amendment for the Glen Hills Area Sanitary Study

Dear Mrs. Outen:

Thank you for providing the Maryland Department of Planning with a copy of the draft text Amendment for the Glen Hills Area Sanitary Study. We reviewed this draft update pursuant to the Code of Maryland regulations 26.03.01.03 and as required by the Environmental Article Section 9-507 (b) (2) and offer the following comments for your consideration.

Summary of Amendment

The Montgomery County Department of Environmental Protection (DEP) engaged in a study of the sustainability of septic systems in the Glen Hills area. The 2002 Potomac Subregion Master Plan recommended this study in order to evaluate long-term sustainable wastewater disposal policies for these neighborhoods.

The majority of existing homes in the study area use wells and septic systems for their water supply and wastewater disposal. These houses were built mostly in the 1950s to 1970s, before the advent of current well and septic system testing and permitting requirements. Historically, some of these systems have failed due to original system design or site limitations. In some cases the septic systems were replaced with more modern designs or sewer service was extended to address these failures.

Phase 1 of this study determined the present status of septic systems in Glen Hills and evaluated the potential sustainability of the existing septic systems in the study area. Phase 2 of the study examined in more detail those parts of the Phase 1 study area with conditions that could limit the long-term use of the existing septic systems and limit the replacement of these systems in the future. Phase 2 also evaluated options for using conventional or innovative septic system

301 West Preston Street - Suite 1101 - Baltimore - Maryland - 21201
Tel: 410.767.4500 - Toll Free: 1.877.767.6272 - TTY users: Maryland Relay - Planning.Maryland.gov

technologies or public sewer service to ensure the sustainability of the neighborhood's wastewater disposal needs.
As recommended by the 2002 Potomac Subregion Master Plan, the goal of the Glen Hills Study was to provide information upon which the County Council could base appropriate policies for wastewater disposal service within the study area. With the completion of the study reports, the County Executive provided these reports to the County Council along with recommendations for service policies.

The County Executive has recommended:

- That the use of on-site septic systems continues to be the primary wastewater disposal method within the study area, consistent with master plan recommendations and Water and Sewer Plan service policies.

- That the provision of public sewer service continues to be used to relieve cases involving documented septic system failures, as needed.

- That the Dept. of Environmental Protection (DEP) and the Dept. of Permitting Services (DPS) coordinate to evaluate and recommend—only as needed—the establishment of health problem areas within Glen Hills. These are areas where future septic system repair or replacement limitations may require the eventual use of public sewer service. The inclusion of such an area in the County's Water and Sewer Plan will require the approval of the County Council.

- That the use of the Water and Sewer Plan's "abutting mains" service policy be restored within the study area. This policy allows for only a single sewer connection for an existing property abutting an existing or approved sewer main. The policy is designed so as not to promote the subdivision or resubdivision of existing properties using public sewer service.

- That the provisions of the Piney Branch restricted sewer service access policy remain unchanged for those parts of the study area located within the Piney Branch subwatershed of Watts Branch.

The text amendment translates the County Executive's sewer service policy recommendations into the format of policy language for the Water and Sewer Plan. It amends existing language addressing the Glen Hills Neighborhoods found in Chapter 1, Section II.E.1.and Table 1-T3: Special Master Plan Water and Sewer (only that part of the table addressing the Glen Hills area).

The following language is added to Chapter 1 Table 1-T3:

> With the master plan-requested study completed in 2014, the following service policies apply to the Glen Hills Study Area:
>
> > Individual, on-site septic systems are the primary wastewater disposal method consistent with the area's standard-type development under the RE-1 Zone.
> >
> > Community sewer service can be considered only under the following conditions for:
> >
> > Properties in need of relief from public health problems resulting from documented septic system failures (Sections II.B.5.b. and II.E.2.).
> >
> > Properties included within a specifically designated public health problem area (Sections II.B.5.a. and II.E.2.).
> >
> > Properties that abut existing or planned sewer mains and that satisfy the requirements of the "abutting mains" policy (Section II.E.3.a.)
> >
> > Properties within the study area and within the Piney Branch subwatershed that satisfy the requirements for community sewer service under the Piney Branch restricted sewer service policy (Section II.E.12.b.).

Consistency with the Comprehensive Plan:

This amendment is consistent with the recommendation of the 2002 Potomac Subregion Master Plan. The 2002 Potomac Subregion Master Plan recommended this study in order to evaluate long-term sustainable wastewater disposal policies for these neighborhoods. The amendment provides a long-term sustainable wastewater disposal policy for the Glen Hills neighborhoods.

Priority Funding Area Review

Pursuant to Finance and Procurement Article 5-7B-02 local jurisdictions are eligible to receive State financial assistance if the project is located in a Priority Funding Area (PFA). We note that this area is not planned for sewer service in the County Comprehensive Plan and therefore the county did not intend for the area to be a PFA.

Growth Tier Map Review

The Glen Hills area is designated Tier III on the Montgomery County Growth Tier Map. Since the amendment does not propose any sewer designation changes no growth tier map amendments are needed at this time.

If you have any questions concerning these comments please call La Verne Gray at 410-767-4574.

Sincerely,

Charles Boyd, AICP
Deputy Director of Planning Services

cc: Jason Dubow, MDP
Steve Allan, MDP

PH 9/17/15
W/S PLAN-GLEN HILLS

KL
CC

CHEN & MCCABE, L.L.P.
ATTORNEYS AT LAW

200A MONROE STREET
SUITE 300
ROCKVILLE, MARYLAND 20850

(301) 279-9500
FAX: (301) 294-5195
WWW.CWTM.NET

WILLIAM JAMES CHEN, JR.*
wjc@cwtm.net
EXTENSION 222

*ALSO ADMITTED IN THE DISTRICT OF COLUMBIA

JOHN F. MCCABE, JR.*
jfm@cwtm.net
EXTENSION 225

October 19, 2015

RECEIVED
MONTGOMERY COUNTY
2015 OCT 19 PM 3:14

County Council for Montgomery County
Stella B. Werner Council Office Building
100 Maryland Avenue, 5th Floor
Rockville, Maryland 20850

HAND DELIVERY

Re: Text Amendment to the Ten-Year Water Supply and Sewerage Systems Plan: Glen Hills Area Sanitary Study

Dear President Leventhal and Councilmembers:

This letter is transmitted on behalf of the Potomac Highlands Citizens Association, Inc., and the Greater Glen Hills Coalition, LLC, to follow-up my letter to the Council of September 17, 2015, which was submitted in conjunction with the public hearing conducted by the T&E Committee on that date on the proposed text amendment to the Comprehensive Ten Year Water and Sewer Plan Text Amendment for the Glen Hills Area of Montgomery County. Since that pubic hearing the Planning Board has considered the text amendment and submitted its recommendation to the Council pursuant to a letter dated October 5, 2015. I attach a copy at **Tab 6.**[1] You will see that the Planning Board has recommended that the proposed text amendment submitted by the County Executive be "amended to provide a faster, more certain path to public sewer service when circumstances warrant", and that "homeowners whose septic systems are failing should not be required to bear the burden of proving that a grave threat to the public health is imminent in order to qualify for sewer service."

I also attach an email exchange that I had with Gene Von Gunten who is the manager of the Well and Septic Section of the Department of Permitting Services at **Tab 7.** This email exchange occurred on September 17, 2015, and clarifies that if a septic system's operation has the types of difficulties which are identified in the County's COMCOR No. 27A.00.01.12 (**Tab 3** to my September 17, 2015, letter), that situation constitutes a "health

[1] Like this letter, my letter of September 17, 2015, had attachments identified as **Tabs 1** through 5. To avoid confusion with the attachments provided by both letters, the attachments to this letter will be identified by consecutive **Tabs 6** through **9.**

hazard." This is a significant acknowledgment and should be considered in conjunction with Mr. Von Gunten's other email which is **Tab 4** to my letter to you of September 17, 2015, in which he notes that those conditions also constitute a "failed or failing septic system."

I also attach a supplemental statement from James T. Noonan of Straughan Environmental which addresses the beneficial implications of sewer service over individual septic systems. **Tab 8.** Please take a moment to read and consider Mr. Noonan's discussion relative to the environmental benefits as determined by the State of Maryland resulting from sewer service as opposed to septic systems.

Finally, in light of the recommendation of the Planning Board and other feedback that has been received since the T&E Committee's public hearing of September 17, 2015, my clients have revised their previously requested text amendment (**Tab 5** to my September 17, 2015, letter), and a copy of that revised proposed text amendment is attached as **Tab 9.** The new revised proposed text amendment also attempts to meld with the proposed text amendment submitted by the County Executive. In that regard, language retained from the Executive's proposed text amendment is in black ink while new language proposed by my clients is in red ink. The preamble is, admittedly, longer than that contained in the Executive's text, but that is because it tracks the history of the septic system problems in the Glen Hills Area starting with (a) the recommendation in the 2002 Potomac Sub-region Master Plan that sewer service be minimized, (b) the plan's recommended study of the septic system problems which establish the undeniable existence of failed and failing septic systems, (c) the significance of COMCOR No. 27A.00.01.12 which establishes that under County regulation the existing conditions constitute "failed or failing" septic systems which also constitute "health hazards" as noted by the emails with Mr. Von Gunten, (d) the master plan's recommendation for "providing new sewer service [upon] well documented septic failures", (e) the undeniable evidence of the existence of those conditions based upon the study's findings and the testimony of the residents of the Glen Hills Area, and (f) the recommendation of the Planning Board. My clients' proposed text amendment includes the policy of the County Executive that the Glen Hills area should remain a low density residential area served with septic systems by including the Executive's policy (in black ink):

> • Individual, on-site septic systems are the primary wastewater disposal method consistent with the area's standard-type development under the RE-1 Zone.

See, **Tab 9**, p. 2.

Further, my clients proposed policies also adopt the Executive's four policies for circumstances under which sewer service would be provided. **Tab 9**, p.2. In addition to the

Executive's policies, my clients' proposed text amendment provides additional policies that are more realistic and responsive to the problems of the residents of the Glen Hills Area by allowing residents with the aforementioned septic problems to apply for sewer service with the assurance that they will be able to proceed through the County's regulatory scheme on a clear, faster, and more certain path. Indeed, one provision authorizes a determination or certification of a failed or failing septic system by an installer or inspector of such systems, who must be designated by the Department of Permitting Services. In addition, the policies proposed by my clients make it very clear that only one sewer connection will be permitted per property, and that connections will not be available for resubdivision of properties or the subdivision of parcels. Thus, there is no development or increased density. Furthermore, the cost for providing the sewer service must be borne by the resident, but no resident is forced to apply, or pay, for sewer service.

In short, my clients proposed text amendment is structured such that anyone reviewing the text amendment, such as MDE or a court, will clearly see the logic and rationale of the County Council, particularly that it recognizes and follows the provisions of the Potomac Master Plan, and that it has reached its decision to approve the text amendment in accordance with the language contained in the master plan. The bottom line is that my clients' proposed text amendment is compliant with the master plan, and is a reasonable response to the undisputed septic system problems that exist in the Glen Hills Area.

The Council's consideration of these matters is sincerely appreciated.

Respectfully submitted,

William J. Chen, Jr.

Attachments.
WJC:mml
cc: George Leventhal, Councilmember
Nancy Floreen, Councilmember
Roger Berliner, Councilmember
Marc Elrich, Councilmember
Tom Hucker, Councilmember
Sidney Katz, Councilmember
Nancy Navarro, Councilmember
Craig Rice, Councilmember
Hans Riemer, Councilmember
Keith Levchenko, Council staff
N:\Bil Chen\GLEN HILLS\COUNTY COUNCIL LTR 10-19-15.wpd

MONTGOMERY COUNTY PLANNING BOARD
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

OFFICE OF THE CHAIR

October 5, 2015

The Honorable George Leventhal, President
Montgomery County Council
Stella B. Werner Council Office Building
100 Maryland Avenue
Rockville, Maryland 20850

Dear Council President Leventhal:

At its regular meeting of September 24, 2015, the Planning Board discussed a proposed Text Amendment to the Comprehensive Water Supply and Sewerage Systems Plan for the Glen Hills Area Sanitary Study. The Amendment, proposed by the County Executive, revises the county's Special Policies for the Provision of Water and Sewerage Service, establishing a policy for wastewater disposal in the Glen Hills neighborhood of Potomac.

The Board considered a Planning Staff report recommending approval of the Executive's proposal, heard extensive testimony from Glen Hills residents, including an alternative policy proposal, and discussed the issue with staff and with representatives of the Department of Environmental Protection. Following the discussion and its deliberations, the Board voted 4-1 to endorse modifying the Executive's proposed text amendment to provide a clear and objective standard for evaluating proposed sewer extensions in the area. Chair Anderson, and Commissioners Fani-Gonzalez, Presley and Wells-Harley voted to support the Executive's proposal with this modification; Commissioner Dreyfuss dissented and argued for an immediate sewer category change for the area. The staff report is attached for the Council's use.

In considering the issues presented by the public testimony, the Planning Board faced two important tasks: respecting the Master Plan's development and environmental policies for Glen Hills and providing clearly needed relief for neighborhood residents whose individual systems have failed or are likely to fail in the near future. A majority of the Board concluded that the Executive's proposal should be amended to provide a faster, more certain path to public sewer service when circumstances warrant. The Board believes that the Executive's proposal to establish both a process for considering when new sewer connections should be allowed and a mechanism to pay for them is sound. The Board, however, is persuaded that homeowners whose septic systems are failing should not be required to bear the burden of proving that a grave threat to the public health is imminent in order to qualify for sewer service. If a property owner with a troubled system can demonstrate that their property would not be considered suitable for a new septic system if the property were being developed for the first time, then that homeowner should be considered eligible for sewer service on public

8787 Georgia Avenue, Silver Spring, Maryland 20910 Phone: 301.495.4605 Fax: 301.495.1320
www.montgomeryplanningboard.org E-Mail: mcp-chair@mncppc-mc.org

health grounds. If, on the other hand, a new septic system using currently accepted technologies and design methods is feasible, then septic treatment should continue to be used. The majority believes that this criterion will make it easier for larger areas of the neighborhood to seek relief under the proposed policy by removing ambiguity concerning what evidence or analysis is required to establish eligibility for sewer service based on public health considerations. It will also preserve Glen Hills as a low-density housing resource that generally relies on individual septic systems, as envisioned by the Master Plan.

Should the Council determine that an amendment to the Potomac Subregion Master Plan is needed to address the Glen Hills issue, the Board majority would support such a request.

Commissioner Dreyfuss felt that recent extensions of public service to parts of Glen Hills, combined with public testimony of neighborhood residents to the effect that many systems are failing or have failed and cannot be repaired or replaced, demonstrated a substantial public health problem and that, as a result, relief in the form of logical sewer main extensions for the entire community was warranted now. Mr. Dreyfuss therefore voted to designate the entire Glen Hills area as sewer category S-3, so that planning for public service could begin and be available immediately as existing individual systems fail. Mr. Dreyfuss believes that such a designation would be in accordance with the 2002 Potomac Subregion Master Plan.

The Planning Board appreciates the opportunity to evaluate the Executive's proposed text amendment as part of the Council's review of the matter. Planning staff will be available at the Transportation, Infrastructure, Energy and Environment committee worksession on October 26.

Sincerely,

Casey Anderson
Chair

Bil Chen

From: Bil Chen [wjc@cwtm.net]
Sent: Thursday, September 17, 2015 4:21 PM
To: 'von Gunten, Gene'
Subject: RE: Health hazards

Thank you. Bil.

From: von Gunten, Gene [mailto:Gene.vonGunten@montgomerycountymd.gov]
Sent: Thursday, September 17, 2015 4:15 PM
To: Bil Chen
Subject: Re: Health hazards

Yes

Sent from my iPhone

On Sep 17, 2015, at 4:12 PM, Bil Chen <wjc@cwtm.net> wrote:

> Gene: May I share that information with the County Council? Bil.
>
> ---
>
> **From:** von Gunten, Gene [mailto:Gene.vonGunten@montgomerycountymd.gov]
> **Sent:** Thursday, September 17, 2015 4:09 PM
> **To:** Bil Chen
> **Subject:** Re: Health hazards
>
> Perhaps not, but failing to the surface, backing up, or contaminating the ground water- they are all HH
>
> Sent from my iPhone
>
> On Sep 17, 2015, at 4:03 PM, Bil Chen <wjc@cwtm.net> wrote:
>
> > Beats me. If the septic system is that bad, failing or failed, I would assume that it is a health hazard. Is that terminology, "health hazard", defined anywhere? Bil.
> >
> > ---
> >
> > **From:** von Gunten, Gene [mailto:Gene.vonGunten@montgomerycountymd.gov]
> > **Sent:** Thursday, September 17, 2015 3:48 PM
> > **To:** Bil Chen
> > **Subject:** RE: Health hazards
> >
> > Who said it would not?
> >
> > **From:** Bil Chen [mailto:wjc@cwtm.net]
> > **Sent:** Thursday, September 17, 2015 3:47 PM
> > **To:** von Gunten, Gene <Gene.vonGunten@montgomerycountymd.gov>
> > **Subject:** Health hazards
> >
> > Gene: If an individual septic system is exhibiting the conditions enumerated in COMCOR 27A.00.01.12, why wouldn't the septic system or property be certified as a health hazard? Bil Chen.

(56)

STRAUGHAN
ENVIRONMENTAL

October 16, 2015

County Council for Montgomery County

Stella B. Werner Council Office Building

100 Maryland Avenue, 5th Floor

Rockville, Maryland 20850

Re: Text Amendment to the Ten-Year Water Supply and Sewerage Systems Plan: Glen Hills Area Sanitary Study

Dear President Leventhal and Councilmembers:

Last month I submitted testimony in support of the text amendment, sponsored by the Greater Glen Hills Coalition and the Potomac Highlands Citizens Association, which would revise the Sewer Service classification for the Glen Hills Community to S-3, Planned Service. In that letter there were several statements regarding the environmental impact of continued use of on-site septic systems. It is my understanding that you have received comment from several sources that, as I am given to understand, claim that septic systems are environmentally safe alternative to community, publicly–owned and operated, sewerage systems. Since I have worked in this field for many years, I have been requested by the Greater Glen Hills Coalition to address this point.

The impacts of septic systems on water quality are well documented. In 2010 the State of Maryland completed the "Phase I Watershed Implementation Plan for the Chesapeake Bay Watershed." On page ES-9 of that document a comparison is made of the impacts of septic system use to sewerage service is made. That document states that nitrogen loads from "new development on well and septic is almost 5 times higher than new loads from sewered areas." On a per household basis septic systems add 18.46 pounds of Nitrogen per year to the waters of the Chesapeake Bay compared to 3.87 pounds per year from a household on public sewer. This is no small difference. Septic systems are one of the major contributing sectors of nitrogen, a key pollutant in the Bay. The State has adopted, as a key strategy for reducing these pollutant loads, connecting septic system communities to Wastewater Treatment Plants with advanced nutrient removal technologies whenever possible.

You have heard from other testimony references to the Septic Tier legislation passed by the Maryland General Assembly in 2012. That is yet another effort by the State of Maryland to "reduce the last unchecked major source of nitrogen pollution to the Chesapeake Bay and other waterways." Again, the purpose of this State legislation was to limit the spread of new subdivisions on septic systems. It was not designed or intended to limit the provision of sewer service. The preamble of the legislation states that "Without action to reduce the nitrogen loads from new development served by on–site sewage disposal

systems, the Phase II WIP will force other sources, such as wastewater treatment plants, urban stormwater, and various agricultural sources to reduce their loads even further, constraining economic growth and placing additional burdens on the agricultural community and other sources."

As I pointed out in my letter of September 17, the State has established a program, with the possibility of financial assistance to connect areas with septic systems to community systems with enhanced nutrient reductions. The Chesapeake Bay Restoration Fund has a number of criteria, that are entirely consistent with the text amendment proposed by the Greater Glen Hills Coalition and the Potomac Highlands Citizen Association, which qualify an area for State funding. Those criteria include:

- Consistency with the Water and Sewer Plan (the area needs to be in a planned service area category (S-3)),
- MDE will require addition information such as public health issues; potential future in-fill development; mitigation measures proposed to limit growth; net nitrogen reduction after accounting for maximum future in-fill development to determine if a PFA exception is warranted and provide an opportunity for public comments.

In light of all of these factors, I again strongly urge this Committee to support and adopt the text amendment as submitted by the Greater Glen Hills Coalition and the Potomac Highlands Citizens Association.

Respectfully Submitted,

James T. Noonan, AICP

Table 1-T3: Special Master Plan Water and Sewer Service Recommendations	
General Area Affected	**Master Plan Service Recommendation & Comments**
Potomac Subregion Master Plan (2002)	
Glen Hills Study Area [Neighborhoods (as defined in the 2002 master plan.)]	The 2002 Potomac Subregion Master Plan recommended new community sewer service be limited only to documented public health problems pending the completion of an area-wide sanitary survey by DPS and DEP. The master plan also provided for "a study of the septic failures in Glen Hills to develop measures to ensure the long-term sustainability of septic service for new home construction and existing home renovations, and to address the need for limited sewer extensions if needed." The master plan study was completed in 2014, and made several key findings: • Approximately 52% of the study area lots were estimated to be permitted prior to 1975 and potentially constrained by lack of adequate reserve area (page 46, §5.1.) • MCDPS record information included documented failures, replacement to septic systems, and records of failed septic field testing. A history of previous septic field failures is an indication of future failures and multiple failures and replacements eliminate useable lot area for future septic field replacements (page 47, §5.8.) COMCOR 27A.00.01.12, states "Any sewage disposal system, with its contents accessible to flies, animals, or surface drainage or endangering a water supply or health in any other way...is considered a sewage disposal ***nuisance***" which requires the owner or occupant of the premise to make application to connect to public sewer. With completion of the study the County Executive has proposed a Water and Sewer Plan Text Amendment for the Glen Hills Area, and the T&E Committee conducted a public hearing on the text amendment. In addition, the Planning Board's recommendation has noted that there was "clearly needed relief for neighborhood residents whose individual systems have failed or are likely to fail in the near future", and that the "Executive's proposal should be amended to provide a faster more certain path to public sewer service when circumstances warrant." The descriptions and findings of the study together with the testimony and submissions of area residents demonstrate the existence of failed septic systems and indications of future failures as contemplated by the master plan. The evidence establishes the need for future sewer service extensions, and that the following policies minimize such extensions in a logical, economical, and environmentally acceptable manner. Accordingly, the following service policies apply to the Glen Hills Area:

	• Individual, on-site septic systems are the primary wastewater disposal method consistent with the area's standard-type development under the RE-1 Zone. • S-3 community sewer service shall be provided under the following special conditions and restrictions (II.A.2.): ° Properties in need of relief from public health problems resulting from documented septic system failures ° Properties included within a specifically designated public health problem area ° Properties that abut existing or planned sewer mains and that satisfy the requirements of the "abutting mains" policy ° Properties within the study area and within the Piney Branch subwatershed that satisfy the requirements for community sewer service under the Piney Branch restricted sewer service policy ° Properties which need service, whether for new construction or renovation, that on-site conventional deep trench septic system is not feasible or adequate. • Sewer service is not available for new lots or new lots created by the subdivision of parcels. Service is available as provided for herein for properties that are, or can be, eligible for one building permit for a single-family detached dwelling. • Documentation of septic systems that are failing or have failed may be supplied by a professional septic system inspector or installer designated by DPS or a public health officer. • Under these policies properties are allowed a single sewer hookup only. [The master plan recommends that only documented public health problems shall be justification for the approval of sewer service area category changes within this area, pending the completion of an area-wide sanitary survey by DPS and DEP.]

MILES & STOCKBRIDGE P.C.

Stephen J. Orens
301-517-4828
sorens@milesstockbridge.com

October 16, 2015

VIA ELECTRONIC MAIL
VIA REGULAR MAIL

The Honorable Nancy M. Floreen
Vice President
Montgomery County Council
Stella B. Werner Council Office Building
100 Maryland Ave.
Rockville, Maryland 20850

Re: Glen Hills Text Amendment to the Comprehensive Water Supply and Sewerage Systems Plan

Dear Vice President Floreen:

Kevin Smart, George Simmons and I appreciate having had the opportunity to explain the unique circumstances of their respective properties on Circle Drive in Glen Hills. Our draft proposal to amend the Water & Sewer Plan to enable an orderly transition of Glen Hills from reliance on septic fields to public sewer is enclosed.

We appreciate your interest in seeking a long term equitable solution to the septic failure history of Glen Hills and look forward to working with you, the T&E Committee and Council as this process moves forward.

Sincerely,

Stephen J. Orens

Encl.

(61)

cc: The Honorable Roger Berliner, Chair, Transportation and Environment Committee
The Honorable Craig Rice
The Honorable Casey Anderson, Chair, Montgomery County Planning Board
The Honorable Sidney Katz
Gwen Wright, Planning Director, M-NCPPC Planning Department
Keith Levchenko, Council Staff
Jeffrey Zyontz, Esquire, Legislative Counsel
Alan Soukup, Department of Environmental Protection
Dr. Steven Goldstein
Ms. Tedi Osias
Ms. Lisa Mandel-Trupp
Brian Jones
William J. Chen. Jr. Attorney for Glen Hills Coalition
Kevin Smart
George Simmons

Draft Glen Hills Amendment to the text of the 2003 – 2012 Montgomery County Comprehensive Water Supply and Sewerage Systems Plan.

The Glen Hills area of Potomac is classified in the RE-1 zone for the development of detached single family homes on lots having a minimum lot size of one-acre. The RE-1 zoning implements the land use and zoning recommended by the 2002 Approved and Adopted Potomac Subregion Master Plan (the 2002 Master Plan). All of Glen Hills is now served by public water while only portions of the area are served by public sewer, extended, for the most part, prior to the adoption of the 2002 Master Plan. The 2002 Master Plan includes a recommendation to exclude the RE-1 zoned areas in Glen Hills from sewer service except for properties at which well-documented septic failures have been identified. However, the Approved 2003 – 2012 Montgomery County Comprehensive Water Supply and Sewerage Systems Plan (the "Water & Sewer Plan") includes a policy directive that needs to be addressed in this Water & Sewer Plan amendment.

The County Council included a clear policy directive in the Approved 2003 – 2012 Montgomery County Comprehensive Water Supply and Sewerage Systems Plan with regard to extending sewer service through the appropriate implementation of the abutting mains policy. The Council addressed its policy directive in the following "Water and Sewer Plan Recommendation"

> **The Council recommends that M-NCPPC and County agency staff pursue appropriate land use restrictions, such as imperviousness limits, in the zoning ordinance and/or subdivision regulations, rather than use wastewater flow or other restrictions in the abutting mains policy as a means of controlling land use.**

Glen Hills has a long history of septic system failures. The now completed Glen Hills Study required by the 2002 Master Plan confirms that history of septic field failures and provides convincing evidence that unidentified septic system failures exist and that future failure and multiple failures are highly probable.

This amendment is intended to implement the County Council's policy directive in the 2002 Master Plan's recommendation favoring "appropriate land use restrictions in the zoning ordinance and/or subdivision regulations, rather than use wastewater flow or other restrictions as a means of controlling land use." The implementation of this policy needs to be equitable and appropriate in order to assure uniformity and to protect the environment without the reliance on wastewater flow restrictions that inhibit achieving the land use and zoning objectives of the 2002 Master Plan.

Accordingly, this amendment to the text of the Comprehensive Water Supply and Sewerage Systems Plan proposes Sewer Service Category S-3 for the Glen Hills area as a means of implementing the Master Plan's land use and zoning recommendations and to achieve the orderly reduction on the reliance on septic systems for wastewater disposal for both existing recorded, buildable lots and for presently un-subdivided and unbuildable properties for which original subdivision applications are approved by the Planning Board. This text amendment to the Water & Sewer Plan does not, however, contemplate the provision of sewer service for new lots created through the resubdivision of previously subdivided record lots.

Samples of Health Problem Areas from the Water and Sewer Plan

Area Name	Well	W-Envl.	Septic	S-Envl.	Zone	No. of Props.	When	Status	Notes
Clarksburg Historic District, Clarksburg	n/a	n/a	septic	in	CRT-0.5, R-200	~ 40		Studied, Pending	Much of this area is within Ten Mile Cr. Watershed; will need pumping systems for sewer service.
Clarksburg Road (Kings Manor), Clarksburg	well	out	n/a	n/a	AR (RDT)	~ 15	2007	Studied, Partially Resolved	Survey area was substnatially larger; 30 properties included in survey. Water main installed in 2003 to serve active well failures; serves most properties.
Fountain View Subdivision, Clarksburg	n/a	n/a	septic	in	AR (RDT)	~ 165		Pending	Large subdivision built to R-R (R-200) Zone standard. Constructed using public water service and septic systems with dry sewers. Dry sewers built early to mid-1970s.
Hyattstown	well	out	septic	out	R-200, Rural, AR (RDT)	~ 60		Studiesd, Resolved	Hyattstown WWTP and sewer system installed c. 1998. Well contaminiation casued by failed septic systems. Decided to fix septic problem.
Lakewood Estates, Rockville	n/a	n/a	septic	in	R-200, RE-1	~ 30	2006	Studied, Resolved	Existing septic subdivision having replacement issues due in part to soils and half-acre lot sizes. Some sewer built 1991 - 1994 for adjacent subdivision. Other sewers built 1998 - 2007.
Sam Rice Manor, Ashton	n/a	n/a	septic	out	RC	~ 50	(1973)	Resolved	Sewer service provided via new WWPS, c. 1980.
The Corral Dr. (9700 Block), Potomac	n/a	n/a	septic	out	RE-2	~ 15	2002	Studied, Partially Resolved	Gravity and low-pressure sewers service most lots; built 2004.
Town of Laytonsville	well	in	septic	out				Partially Resolved	Groundwater contamination and small lots constrained by well locations. Solution: public water service. Water system completed 2014. Owners have been slow to hook up.
Tune Avenue Area, North Damascus	n/a	n/a	septic	out (see notes)	R-200, RE-1	~ 45	2004	Studied, Pending	The 1985 master plan did not include this area in the planned sewer envelope. Following creation of the health probeom area, the 2006 master plan made this area and others part of the sewer envelope.

The Montgomery County Dept. of Environmental Protection, in cooperation with the Dept. of Permitting Services and the Washington Suburban Sanitary Commission, has prepared the following information to respond to residents' questions about septic systems and public sewer service in the Glen Hills study area. (9/10/15)

SEPTIC SYSTEMS

Q: *Can a house with an existing septic system be enlarged or replaced using that same system?*

A: This depends on the existing septic system permit and on the nature of the proposed house addition or replacement. Whether or not a house with an existing septic system can be enlarged or replaced using the existing septic system is determined by the Dept. of Permitting Services, Well and Septic Section, on a case-by-case basis.

Q: *What should a property owner do to maintain an existing septic system?*

A: Proper maintenance of a septic system includes pumping out the septic tank every two to five years. The pump-out frequency depends on the intensity of use -- typically the number of persons in the house using the system. More use creates the need for more frequent pumping. Users should also be aware of what should not go into the septic system. These include: any paper products (other than toilet paper approved for septic systems), personal hygiene products, food scraps and coffee grounds, and commercial septic system chemical additives or enzymes.*

** These products are advertised to reduce the need for septic tank pumping. However, they act to keep more waste solids in suspension, rather than settling to the bottom of the tank. This allows more solids to flow out of the tank, leading to premature clogging and failure of the drainfield.*

Q: *How does a property owner with a septic system know when that system is starting to fail?*

A: The first sign may be a sewage odor outside near the septic tank or the drainfield or inside the house. Sink drains or toilets may also run slowly. Sewage either coming to the surface of the yard or backing up into the house are clear signs of a septic system failure. Property owners with these conditions need to contact the Dept. of Permitting Services (DPS), Well and Septic Section. DPS will determine whether correcting a failed septic system requires replacement of the septic system or if it can be addressed by a pump-out or a relatively simple repair, such as fixing a break or clearing a blockage in a pipe.

Q: *What are the different types of septic systems available for Montgomery County residents and how are they used?*

A: Three types of septic systems—referred to as "conventional" systems—are suitable for new construction (new buildings, replacement buildings, or substantial additions to existing buildings):

- Deep stone-trench septic systems
- Shallow stone-trench (or shallow tile) septic systems
- Sand mound septic systems

Alternative/innovative septic systems (such as shallow field dosing systems) are allowed as replacement systems for existing houses only. They are used only in cases where a conventional system replacement will not work.

Q: *What are the "BAT" systems the State now requires?*

A: The State requires the use of best available technology (BAT) for nutrient removal for all new and replacement septic systems. This technology is expected to reduce pollutant flow to groundwater and surface waters, and ultimately the Chesapeake Bay, and to extend the useful life of a septic system beyond that for a system lacking a BAT installation. BAT systems require electricity for operation of the aeration system installed in the septic tank. The state also requires owners of

BAT systems to have a minimum five-year maintenance contract with a licensed contractor. Grants of up to $15,000 from the State's Bay Restoration Fund (BRF) are available to help owners install BAT systems.

Q: *What factors does the County consider in permitting a suitable location for a septic system?*

A: Finding a suitable site on a property for a new septic system under County and State regulations requires an approved:

- Water table test to determine the depth to the water table and subsurface rock.
- Percolation test to determine the soil percolation rate.
- Site layout plan to ensure:
  - Adequate area for the placement of the initial system and reserve drain fields -- typically at least 10,000 square feet.
  - Required minimum setbacks (separation) from features such as structures; property lines; wetlands, streams, stream buffers, and flood plains; trees; wells and other septic systems; and steep slopes

Specific requirements can vary depending on the type of septic system proposed. Testing results may also result in the need to use a specific type of septic system. For example, a water table test showing shallow ground water could indicate the need to use a sand mound system instead of a deep trench system.

Regulations require a 100-foot well separation between all wells and septic systems. The availability and use of public water service can therefore allow for more flexibility in the siting of a septic on a property.

Q: How much does it cost to install a new septic system?

A: The following information was developed for the Phase 2 report from the Glen Hills Study:

> "The costs listed in Table 4.2 are for new construction, but excludes the cost of BAT technology, except in the case of drip systems. The cost of engineering design, permit application fees, and testing has also been excluded. BAT technology can add $6,000 to $8,000 or more to the cost of a system."

Table 4.2 – Range of Costs for Replacement of On-Site Disposal Systems

Septic System Type	Estimated Cost of installed system - 3 or 5 Bedroom House	
	3 Bedrooms	***5Bedrooms***
Deep Stone Trench [A]	$10,000	$17,500
Shallow Stone Trench [A]	$11,500	$20,500
Sand Mound [B]	$20,000	$30,000
Drip Disposal [C]	$37,000	$48,000

[A] Deep trench and shallow trench costs also include excavation, trenching, fill, piping, and seeding. Costs taken from RMS Means (2012).

[B] Sand mound system costs provided by MCDPS (April 2011).

[C] Drip disposal system costs provided by MCDPS and discussions with manufacturer. The cost of Best Available Technology (BAT) tank is included; required for replacement drip disposal systems only

As noted previously, grants of up to $15,000 from the State's Bay Restoration Fund (BRF) are available to help owners install of best available technology (BAT) nutrient reduction systems.

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PUBLIC SEWER SERVICE

Q: *What environmental concerns exist about using public sewer service?*

A: Construction of new sewer mains can result in short-term disturbance along main alignments, typically along streets. However, run-off from construction areas has to be controlled and disturbance within construction areas has to be mitigated as soon as possible. Some longer-term tree loss may also occur. The Washington Suburban Sanitary Commission (WSSC) will work with affected property owners to minimize the effects of construction on existing trees.

Sewerage systems may leak due to pipe breaks that tend to occur in trunk sewers located along stream valleys. Stream channel and bank erosion can expose formerly buried pipes and manholes leaving them vulnerable to breaks. The County has also experienced sewage discharge leaks due to the failure of central wastewater pumping stations and breaks in their associated force mains. Pumping station operations are monitored at all times. Where force mains are sited in remote locations, leaks are sometimes more difficult to discover. Sewer system leaks from local service mains (typically from manholes along public streets) more often result from pipe blockages due to tree roots, debris, and/or fats/grease. These leaks are usually noticed and resolved quickly by clearing the blockage.

WSSC operates under a consent agreement with EPA to repair and rehabilitate existing sewer mains to reduce sanitary sewer overflows (SSOs), and to quickly respond to SSOs when they occur.

Q: *Who should someone noticing a sewer leak contact to report it?*

A: Call the Washington Suburban Sanitary Commission's 24-hour emergency center at either 301-206-4002 or EmergencyCallCenter@wsscwater.com.

Q: *If there is a back up in the sewer system, who is responsible for clearing it?*

A: Once built, sewer mains in the street and service connections between the main and the customer's property line are the responsibility of the Washington Suburban Sanitary Commission. The service hookup between the property line and the house is the customer's responsibility.

Q: *Where are gravity sewers and pressure sewers used and why?*

A: The Washington Suburban Sanitary Commission (WSSC) prefers to use gravity sewerage systems wherever possible. However, WSSC will allow the use of low-pressure sewerage systems, which require an on-site pump (grinder pump) for each house served, where needed to avoid 1) construction of new gravity mains through environmentally sensitive areas, and/or 2) construction of extraordinarily long main extensions. Gravity systems, as the name implies, operate using the force of gravity to pull sewage flows down through the mains to a treatment plant. This makes them cheaper to operate than pressure systems, which require owners to use electricity to run the pumps.

Q: How much does it cost to connect a house to an existing sewer main?

A: The Washington Suburban Sanitary Commissions (WSSC) charges approximately $11,000 for installing a new sewer service connection. The connection runs between WSSC's sewer main, usually along the street, and the property line. This charge can be deferred over a 20-year payback period.

WSSC also assesses a Systems Development Charge (SDC) for new customers. The SDC serves to support the cost of major new facilities and of expansion of existing major facilities required to accommodate new customers throughout WSSC's service area. WSSC's SDC rates currently range from approximately $3,100 for a house with one or two toilets to $7,100 for a house with five toilets. These rates are based on new water and sewer service and would be less if an owner is connecting the property only to sewer service. There are also a variety of

application, permit, and inspection fees WSSC charges as part of this process, although ranging from $35 to $550 they are not as nearly significant as the connection and system development charges.

On site work is the other major cost component for connecting to an existing main. A WSSC-registered plumber will need to construct the sewer house hookup that will run from WSSC's service connection at the property line to the house. Abandonment of the existing septic system is also needed. On site costs can vary substantially depending on factors such as subsurface conditions, location of the existing septic tank and distance of the house from the property line.

Total project costs for a connection to an existing sewer main are estimated to range from $23,000 to $31,000.

WSSC's website at www.wsscwater.com provides a detailed explanation of the various requirements, fees and processes. On the homepage, go to the menu bar at the top, select "Business and Construction" and scroll down and select "Development and Construction Services." From this page select "Permit Services," which will provide detailed, step-by step connection processes along with the fees, forms, flow charts and various informational items.

Q: How much does it cost to build new sewer mains?

A: Applicants for new sewer main extensions should expect extension costs to start at $400 to $500 per linear foot of main. Owing to economies of project scale, shorter extensions (those less than 500 feet) will tend to cost more per foot. Other factors can also raise extension costs such as cutting existing pavement, constructing through rock or at excessive depth, and using the WSSC-built extension program. Extension costs as high as $1,000 per linear foot of main are possible. Under the Washington Suburban Sanitary Commission's (WSSC's) system extension permit (SEP) program, commonly used for new main installation, applicants have to finance main design, permitting and construction. In order to address cost magnitude and equity problems with the existing extension program, the County is pursuing the feasibility of an alternative financing system with WSSC and Prince George's County.

Q: *Is there enough capacity in existing sewer mains to serve the Glen Hills neighborhood?*

A: WSSC requires a minimum diameter of 8 inches for its gravity sewers. Sewers of this size will have more than sufficient capacity to handle local flows from residential public sewer users in an area such as Glen Hills. Small-diameter, low-pressure sewers are designed based on expected flows into the main and can have limitations of the number of connections allowed.

SEPTIC SYSTEMS OR PUBLIC SEWER SERVICE

Q: *If there is available sanitary sewer capacity why do sewer service categories not allow homes using septic systems to connect to public service?*

A: In the case of the Glen Hills area, sewer service policy, rather than sewer main capacity, controls which properties are allowed to connect to public sewer service. The neighborhood is zoned as RE-1, or one house per 40,000 square feet of land. An acre equals 43,560 square feet. Zoned as such, the Glen Hills area is not generally intended for public sewer service by long-standing, Council-adopted Water and Sewer Plan policies. Most properties are therefore intended to use on-site septic systems and are designated as sewer category S-6. In general, the County's land use policies for areas zoned for lower-density development expect that actual density of residential development will depend on the suitability of the land for septic systems. The 2002 master plan supports this general policy through its sewer service recommendations. Master plan service recommendations existing before 2002 were different in this regard and did allow for some sewer service extensions to support new development within the study area.

Q: *Why is public sewer service approved for and available to some but not all properties in the study area?*

A: Several different sewerage system policies have applied to the study area over time, resulting in a patchwork pattern of public sewer service approvals.

Currently, the service recommendations from the 2002 Potomac Subarea Master Plan prevail. The only justification for providing new public sewer service in the Glen Hills area is to relieve a documented public health problem resulting from a septic system failure. Providing sewer service to relieve failed septic systems has long been a reason that sewer mains were built in the study area.

Water and Sewer Plan service policies generally intend that areas such as Glen Hills, zoned for lower-density development (see above), will use individual septic systems. However, before the adoption of the current master plan in 2002, prior master plan recommendations allowed the County to consider public sewer service to areas zoned for lower-density development on a case-by-case basis. This resulted in some sewer main extensions in the study area such as those built in the early 1990s along Jasmine Hill Terr. and Autumn Oaks La. Before that, some sewer mains were extended into the neighborhood in the late 1960s following construction of the trunk sewer main along Watts Branch. This occurred before the State delegated water and sewer service planning authority to the County government in the early 1970s.

Also before the adoption of the 2002 master plan, properties that abutted an existing or approved sewer main and existed when the main was built were allowed a single service connection to that main.

Q: *Why did some properties along Scott Dr. and Veirs Dr. receive public sewer service?*

A: These properties are located within Rockville's public water and sewer service area as designated by the State. The approval and provision of sewer service to these properties required annexation into the city. Until annexation occurs, other properties also in the city's service area need to use on-site septic systems.

Q: *In terms of a property owner's responsibilities, what is the major difference between having public sewer service versus an on-site septic system?*

A: Customers using public sewer service pay an authorized utility to have their sewage collected and treated at a central treatment facility. The utility and its operation of the collection system and treatment plant are regulated by federal, state, and local governments. Homeowners using a septic system are essentially their own wastewater utility, responsible for the management, maintenance and replacement of their septic systems.

Maryland has enacted environmental regulations aimed at significantly reducing pollutant discharges from wastewater plants. These efforts are supported by revenue from the Bay Restoration Fund (BRF) paid by property owners using public sewer service. The State is working to control the use of septic systems throughout the state and is seeking to improve the nutrient reduction performance of new and replacement septic systems (BAT as explained above). MDE has said that houses using septic systems generate more nitrogen that flows into groundwater and streams, and ultimately to the Chesapeake Bay, than do houses connected to public sewer systems. The State allocates up to $15,000 of BRF revenue per house to assist owners with costs for BAT upgrades for existing septic systems. This allocation comes from BRF fees paid by property owners using septic systems,

Annual BRF charges are the same for residential users of public sewerage systems and for residential users of septic systems.

WEST MONTGOMERY COUNTY CITIZENS ASSOCIATION

P.O. Box 59335 • Potomac, Maryland 20854

Founded 1947

Testimony of Susanne Lee

President, West Montgomery County Citizens Association

Glen Hills Resident and Member of the Glen Hills Sewer Study Citizens Advisory Committee

in support of

Glen Hills Area Proposed Text Amendment CPTA 15-CH1-01T to the

Montgomery County Comprehensive Water Supply and Sewerage Systems Plan

Public Hearing before the Transportation, Infrastructure, Energy, and Environment Committee

of the Montgomery County Council

September 17, 2015

The West Montgomery County Citizens Association (WMCCA) strongly supports and urges adoption by the Montgomery County Council of the Glen Hills Study Area Text Amendment CPTA 15-CH1-01T to the Montgomery County Comprehensive Water Supply and Sewerage Systems Plan and Water Plan as proposed by Montgomery County Executive Isiah Leggett.

The proposed amendment confirms that the Glen Hills area is to remain one of individual on-site septic systems, provides relief to individual homeowners for true public health problems, allows for limited hook ups to abutting mains, and affirms the Piney Branch Sewer Restricted Access Policy. Summarized below are the major reasons WMCCA believes the amendment should be adopted and one caveat regarding the abutting mains proposal.

The amendment and its components:

1. Reflect and ensure consistency with the requirements of the Potomac Subregion Master Plan, the Montgomery County Comprehensive Water Supply and Sewerage Systems Plan, the Piney Branch Watershed Special Protection Area, the Piney Branch Sewer Restricted Access Policy, and the Maryland Sustainable Growth and Agricultural Preservation Act of 2012.

   - Potomac Subregion Master Plan (Master Plan)
     Glen Hills is an RE-1 zone (minimum lot size 1 acre) located within the Potomac Subregion and thus subject to the requirements of the Master Plan. Under the Master Plan, community sewer service generally is excluded in low density zones (RE-1, RE-2, and RC). Master Plan at p. 23. With regard to Glen Hills in particular, the Master Plan states that "[t]his plan recommends restricting further sewer extensions in Glen Hills to those needed to relieve documented health problems resulting from failed septic systems." Master Plan at p.24. The Master Plan further states that a study is to be conducted of Glen Hills and a policy developed: "Under this policy the sole basis for providing new sewer service would be well-documented septic failures where extension could be provided consistent with results of the study and in a logical, economical, and environmentally acceptable manner. *Id.*

     Montgomery County Comprehensive Water Supply and Sewerage Systems Plan states that "[a]reas zoned for lower density residential development (RE-1, RE-2, etc.) are...intended to be served by individual systems." Section II.D.2

     Piney Branch Watershed Special Protection Area (SPA) and the Piney Branch Sewer Restricted Access Policy
     Approximately one third of the Glen Hills area is within the Piney Branch Watershed SPA, an area of "unusually high water quality", "fragile ecosystems" and "susceptibility to development pressures." Master Plan at pp. 16-17. As a result, that portion of Glen Hills is subject to the requirements of the Piney Branch Sewer Restricted Access Policy as set forth in the Master Plan at 24-25 and the Montgomery County Comprehensive Water Supply and Sewerage Systems Plan at Section II.E.12.b.

Sustainable Growth and Agricultural Preservation Act of 2012

Pursuant to the Act, on September 18, 2012, the Montgomery County Council, on the recommendation and with the approval of the Maryland Department of Planning, designated the Glen Hills area as Tier III – Large Lot Development and "Rural Villages" on septic systems.

2. Maintain and help preserve and protect Glen Hills' unique environmental features and services. Glen Hills is a low density large lot zone crisscrossed with wetlands, ponds, and stream valleys. The scientific studies conducted for the Potomac Subregion Master plan documented its status as a "Green Wedge" serving as a critical recharge area for the Piney Branch and Watts Branch streams given the extensive development in their headwaters.

3. Reflect the actual, on the ground conditions, in Glen Hills. There are currently no documented, unresolved septic failures, no evidence of contamination of any kind from septic systems, and as the County has further determined, no public health problem areas.

4. Are reasonable, logical, practical, and sustainable to the extent they:
   - Provide relief to homeowners in the unlikely event that a septic system fails and cannot be repaired or replaced on site;
   - Allow for limited hook ups for those who abut an existing main;
   - Ensure that if there are ever public health problems, the Montgomery County Council can step in and approve community service for the homeowners in affected areas; and,
   - Confirm that Glen Hills properties in the Piney Branch watershed will continue to be subject to the Piney Branch Sewer Limited Access Policy, as are other properties in the watershed.

5. Remove the "dark cloud" of uncertainty over homeowners and their property values created by erroneous, unfounded accusations that the Glen Hills area and specific individual properties are failing or will fail on septic systems.

6. Allay Glen Hills residents' fears that they will forced to accept sewer extensions and their enormous costs when they neither want nor need them.

7. Confirm and ensure property owners' expectations, grounded in the Potomac Subregion Master Plan, that Glen Hills, successfully developed utilizing on site systems, will continue as such.

WMCCA's only caveat is that additional restrictions should be placed on the abutting mains policy to ensure that its adoption in Glen Hills does not undermine the environmental goals of low density zoning by allowing the inappropriate, incremental expansion of sewers throughout the area, including to

environmentally sensitive areas. Master Plan at 23-24. As a result, we recommend that the abutting mains policy should be limited to the 21 properties currently identified by County Executive Leggett as abutting existing mains, all of which are improved with single family homes. The policy should further exclude development in environmentally sensitive areas of those properties and development that does not conform to established environmental standards. Master Plan at 24. It should also clarify that no one can be forced to hook up just because they own one of the 21 properties that abut a main.

Although not addressed in the proposed amendment, WMCCA also supports the efforts of Montgomery County and the Washington Suburban Sanitary Commission to develop a financing system to assist residents with the costs of sewer line construction if it is determined that a true public health emergency exists as a result of a septic system that has failed and cannot be repaired or replaced.

Thank you very much for your consideration of our comments. Attached to my testimony for the use of the Council and inclusion in the administrative record are a series of documents submitted by individual citizens and WMCCA during the course of the conduct of the Glen Hills Study. If you have any questions, please contact me at 301-956-4535 or at susannelee1@hotmail.com.

Susanne Lee

President, West Montgomery County Citizens Association

Glen Hills Resident and Glen Hills Sewer Study Citizens Advisory Committee Member

12900 Circle Drive

Rockville, MD 20850

Montgomery County Council
Stella B. Werner Council Office Building
5th Floor, 100 Maryland Avenue
Rockville, MD 20850

Attn: Councilmember Roger Berliner, Chair
Transportation, Infrastructure, Energy,
and Environment Committee

October 14, 2015

Dear Councilmembers:

Thank you for your continued work and attention to the Water and Sewer Plan Text Amendment proposed by County Executive Isiah Leggett for the Glen Hills Area (CPTA 15-CH1-01T). As you know, the amendment engendered animated public discussion at the T & E Committee hearing as well as at the Planning Board hearing on September 24th. At the conclusion of testimony, the Planning Board voted to recommend County Council approval of the amendment.

Nevertheless, we are concerned that exaggeration and misinformation continue to cloud the debate that is necessary, particularly as the T&E Committee works to finalize its own recommendations to the Council. In that spirit, we write in further support of the proposed Amendment and to clarify five key points.

1) The alternative text amendment proposed by William Chen is based upon unsubstantiated claims and would unfairly punish homeowners with septic systems.

By letter dated September 17, 2015 to the Montgomery County Council, Attorney William Chen proposed a text amendment to change the entire Glen Hills Area from Sewer Category S-6 to S-3 based on an unfounded allegation that properties in the Glen Hills Area were "sewage disposal nuisances" in violation of COMCOR 27A.00.01.12. However, there is absolutely **no** evidence that **any** of the 542 properties in the Glen Hills Area is a "sewage disposal nuisance." In particular, there is **no** documentation that any sewage disposal system in the Glen Hills Area has its contents "accessible to flies, animals, or surface drainage or [is] endangering a water supply or health in any way."

The Chen amendment supports construction of astronomically expensive sewer infrastructure resulting in potentially enormous costs to homeowners. In contrast to Glen Hills property owners' current rights under S-6 to replace their septic system, under Chen's proposed S-3 category change, property owners are prohibited from replacing existing septic systems and are required to hook up to sewer service. The only way to remain on septic and avoid these enormous costs is to obtain a replacement interim permit septic system. This can occur only if the homeowner applies for and obtains exception approval from the Department of Environmental Protection, a step not required under S-6. DEP exception approval is required to allow the Department of Permitting Services to investigate a replacement septic system, including the possibility of requiring new on-site testing.

The Chen Text Amendment would result in increased overall density and construction in environmentally sensitive areas in violation of the Potomac Subregion Master Plan, the County Sewer Systems Plan and Policy, the Piney Branch Sewer Restricted Access policy, and the Maryland Sustainable Growth and Agricultural Preservation Act. Supporters of the Chen Amendment unabashedly state that they desire public sewer so they can enlarge their existing houses, tear them down and build larger ones, or flip them and sell them at an increased value. Others wish to add separate accessory dwelling units, or build even more ambitiously, including new road construction to vacant undevelopable lots or portions of lots and construction on lots located in wetlands, stream valleys and flood plains. These activities represent the antithesis of the goals of Master Plan and County and State provisions governing RE-1 low density zones

Finally, we stress that any proposal to change to S-3 requires a new administrative process, including actual notice to all property owners and the opportunity to comment.

2) Emotional testimony related to septic system failures was exaggerated and in some cases false.

Contrary to allegations made at the T&E and Planning Board hearings, there are **no** current documented septic system failures in the Glen Hills area. Also, importantly, there has never been **any** evidence **ever** of groundwater contamination. The County has determined there are **no** public health problem areas. ***There is no verifiable documentation or scientific evidence that demonstrates otherwise.***

Emotional testimony sensationalizing the potential for children to be playing on soggy lawns with feces and smells from neighboring yards is attention getting. However, no evidence was presented at the T&E hearing that this is actually happening anywhere in Glen Hills. Instead, anecdotal evidence presented at the hearing cited houses with past septic issues, many that occurred 20 plus years ago. However, these were all resolved and many of the houses have been sold and resold, all in compliance with the requirements for a functioning septic system. An examination of home sales in Glen Hills demonstrates that in this sought after area there has been no loss of real estate value due to septic issues.

The example most frequently cited by proponents of S-3 is a property at 12805 Spring Drive. However, as public records show, this home was sold in 2014, and upon sale, the septic tank and field were deemed functioning. The previous owner of this property noticed a smell in 2010, and upon inspection what was found to be wrong was a faulty pipe connection due to a botched plumbing job. ***Once corrected, the problem was solved. In contrast to exaggerated testimony, this was never a septic "failure".***

The other property cited by S-3 proponents as a "failed septic" is 9517 Overlea Drive. However, it was actually listed and sold in 2012. Required by sale, inspection found that the septic tank had not been pumped since 1993, almost 20 years prior. This lack of maintenance resulted in clogged baffles and a compromised field. The issues were **not** due to any intrinsic defect or deficiency in the system. A new BAT tank was installed and the field was repositioned with a drip innovative system, which is now working properly. Proper maintenance would have avoided these repairs to an inappropriately maintained system.

As these episodes demonstrate, we suggest greater effort aimed at educating residents with regard to proper septic operation and maintenance would be helpful. This could be done with inexpensive fliers, notifications to new home owners, and on relevant county web sites. Such modest effort would alleviate anxiety related to the above, and save all involved huge added time and expense. Our own ad hoc efforts at education cannot replace more systematic (and official) recommendations and advice from County government.

3) The enormous cost of sewering Glen Hills was not addressed at the hearings.

Sewering Glen Hills would be astronomically costly, and is illogical. It would require the environmentally destructive extension of unnecessary public infrastructure into a neighborhood with a hilly terrain and extensive stream valleys and flood plains. Many millions of dollars would be required not only for trenching, but for a very high number of pumping stations due to the hilly terrain.

Glen Hills is an area of large 1-3 acre lots that would require extremely long extensions. It is so ill suited for sewering that the County's own study consultants were forced to propose 13 separate new sewer lines - 5 to the Piney Branch and 8 to the Watts Branch. Yet, even these would provide service to only 50% of the homes currently on septic (197 out of 406). The cost to homeowners for these long extensions and hook ups would be as much as $100,000 or more per household – in sum millions and millions of dollars to be paid by homeowners to sewer just half the homes, ***with the vast majority of these homes not even desiring or needing a hook up !***

4) Adverse environmental impacts of sewer vs. septic

During the T & E Committee Hearing, Councilmember Berliner requested information regarding the environmental impacts of septic v. sewer. The Potomac Subregion Master Plan (p.21) addresses this issue directly:

"Providing community sewer service to relieve failed septic systems minimizes groundwater contamination. However, the provision of community sewer service can damage the environment and water resources by facilitating development to the maximum zoning density. Extensions along stream valleys can also create habitat disturbance, threatening species survival, and can adversely affect the natural hydrologic system due to wetland fragmentation. Once sewer lines are in place, their structural integrity may deteriorate over time, resulting in sewage leaks and further disturbance to the ecosystem. This is particularly troublesome where eroding or shifting stream channels expose sewer mans and manholes, leaving them more susceptible to damage."

In addition, septic systems allow the groundwater to be recharged on site to the same aquifer and watershed resulting in immediate replenishment of the local water table.

This analysis is particularly relevant with regard to Glen Hills, an environmentally sensitive large lot, low density RE-1 zone crisscrossed with ponds, wetlands, seeps, ephemeral streams, steep stream valleys and flood plains. It has these features because it contains headwater tributaries of both the Watts Branch and Piney Branch streams. Extending sewers to such an area will not only increase overall density, but sewers tend to change the hydrology and alter the function and the very existence of such features, further undermining their critical role as

"recharge" areas. According to County Officials, there has never been any evidence of groundwater contamination caused by septic systems in Glen Hills and; therefore, nothing to be relieved by sewering. In contrast, the adverse impacts of sewers are legion: WSSC recorded 160 sewage spills from sewer lines in 2014, including more than 13,000 gallons spilled into streams in January 2014 alone.

USEPA has determined that decentralized wastewater systems such as septic systems can "protect public health, preserve valuable water resources, and maintain economic vitality in a community" and that "adequately managed decentralized wastewater systems are a cost-effective and long-term option for meeting public health and water quality goals, particularly in less densely populated areas. (see http://water.epa.gov/infrastructure/septic/index.cfm). The advantages of septic over sewer are further described at these websites:

http://www.ses-company.com/resource-center/advantages-of-septic-systems-over-public-sewer-systems.html

http://lewisfarmsandliquidwaste.com/information/advantages-of-having-a-septic-system/

http://www.septicsystem.com/septic-vs-sewer.html

5) The Montgomery County Planning Board's Proposed Amendment Modification Should Be Rejected.

On September 24, 2015, the Planning Board proposed a modification of the amendment that would expand sewer service beyond documented septic system failures and public health problem areas to include the following situation:

"If a property owner with a troubled system can demonstrate that their property would not be considered suitable for a new septic system if the property were being developed for the first time, then that homeowner should be considered eligible for sewer service on public health grounds. If on the other hand, a new septic system using currently accepted technologies and design methods is feasible, then septic treatment should continue to be used."

The modification should be rejected for the following reasons:

1. It establishes a new triggering standard "troubled system" that is so broad as to be meaningless and unenforceable as it could include any septic issues from minor or major repairs to the need for ordinary, straightforward replacements. It ignores the fact that even when there may be rare problems, systems can be easily repaired or, if necessary, replaced. Septic technology is constantly improving and there are a very, very small and increasingly dwindling number of situations in which a system fails and cannot be replaced on site thus requiring a hook up.
2. The use of the phrase "considered suitable for a new septic system" establishes new, ambiguous standards as does this new interpretation of what constitutes "public health grounds."
3. Given that septic requirements for new house construction are different from existing houses, this change could potentially impact and extend sewer to very large numbers

of existing properties throughout the County that have functioning systems so long as they can claim some type of "trouble".

4. It rewards "bad behavior" leading to "trouble" as has occurred in the past in Glen Hills when builders ran over and purposefully destroyed septic systems and when others failed to maintain them in order to trigger failures that would result in approval for sewer.
5. It fails to acknowledge and clarify the differences between what systems can be approved now for existing houses, e.g. innovative technologies vs. new houses, and in particular whether those innovative technologies are considered "currently accepted technologies and design methods." Constantly improving septic technology methods that were considered innovative a few years are now considered standard technologies.
6. The proposed modification conflicts with and would require revisions to not just the Potomac Subregion Master Plan, but also the County Sewer Systems Plan and Policy, the Piney Branch Sewer Restricted Access policy, and the Maryland Sustainable Growth and Agricultural Preservation Act Sewage Plan.

Again, we thank you for your work, and your attention to this issue.

Sincerely,

Paul D. Roepe, Ph. D.
Glen Hills Resident for 18 years
Professor of Chemistry and Professor of Biochemistry and Cellular and Molecular Biology
Co-Director, Center for Infectious Disease, Georgetown University
9600 Watts Branch Drive, Rockville, MD 20850

Ginny Barnes
Environmental Chair
West Montgomery County Citizens Association (WMCCA)

Susanne Lee
Glen Hills Homeowner for 37 years
President, WMCCA and Glen Hills Study Citizens Advisory Committee Member
12900 Circle Drive, Rockville, MD 20850

Alison Mrohs
Glen Hills Resident for 17 years
Board Member, WMCCA and Glen Hills Study Citizens Advisory Committee Member
12900 Valley Drive, Rockville, MD 20850

Ray Mrohs
Glen Hills Resident for 17 years
12900 Valley Drive, Rockville, MD 20850

John Moult, D.Phil.
Glen Hills Resident for 27 years
Glen Hills Study Citizens Advisory Committee Member
13409 Valley Drive, Rockville, MD 20850

Ken Bawer
Glen Hills Resident for 17 years
IT Specialist
Board Member, Maryland Native Plant Society and Watts Branch Watershed Alliance
8 Cleveland Court, Rockville, MD 20850

Mary T. Zack
Glen Hills Resident for 39 years
Realtor, Long and Foster Realty, Inc.
12712 Circle Drive, Rockville, MD 20850

Sarah W. Hamilton
Glen Hills Resident for 18 years
President, Marketing Ink Consulting
9600 Watts Branch Drive, Rockville, MD 20850

Alex R. Folk
Glen Hills Resident for 17 years
Executive Officer, government sector
9601 Watts Branch Drive, Rockville, MD 20850

Jeremy K. Raines, Ph.D., P.E.
Glen Hills Resident for 37 years
Raines Engineering
13420 Cleveland Drive, Rockville, MD 20850

Betsy Folk
Executive Officer, non profit sector
Glen Hills Resident for 17 years
9601 Watts Branch Drive, Rockville, MD 20850

cc: Casey Anderson, Chair, Montgomery County Planning Board